INSIDE PINE GAP

THE SPY WHO CAME IN FROM THE DESERT

DAVID ROSENBERG

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Annotation

In 1966, Australia and the US signed a treaty that allowed the establishment of a jointly run satellite tracking station, just south of Alice Springs. For more than forty years it has operated in a shroud of secrecy and been the target of much public and political controversy. For the first time, a US high-tech spy who worked at Pine Gap for 18 years speaks out to give an insider's account of what happens behind those locked gates in the middle of the Australian desert.

Author David Rosenberg details his career with an American intelligence agency during a tumultuous period in history that covered the terms of three American Presidents, four Australian Prime Ministers, the end of the Cold War, a peace treaty between Israel and Jordan, two wars in Iraq, genocide in Rwanda, as well as the 'War against Terror' and the emergence of North Korea as a nuclear-armed nation. This is a fascinating glimpse inside the top-secret world of military surveillance.

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David Rosenberg
INSIDE PINE GAP
THE SPY WHO CAME IN FROM THE DESERT

FOREWORD
by Professor Desmond Ball

Pine Gap is one of the largest, most important and most secret US intelligence collection stations in the world. Specifically, it is a ground control and data processing station for a small number of geostationary signals intelligence (SIGINT) satellites, which collect a wide range of foreign signals, including telemetry associated with tests of advanced weapons systems, radar emissions, other forms of electronic intelligence (ELINT) and microwave telecommunications (providing communications intelligence, or COMINT). The first generation of these satellites was codenamed Rhyolite; its successors have been called Aquacade, Magnum, Orion, Advanced Orion, and Mentor.

The station officially became operational on 19 June 1970, when the first Rhyolite satellite was launched, and operates under an agreement between Washington and Canberra signed on 9 December 1966. It was initially managed by the Office of SIGINT Operations (OSO) of the Central Intelligence Agency (CIA), under the direction of a super-secret intelligence satellite coordinating agency called the National Reconnaissance Office (NRO). The NRO's executive role at Pine Gap was officially declassified on 15 October 2008. The ELINT analysts at the station were provided by the National Security Agency (NSA).

David Rosenberg was one of these ELINT analysts. Having joined the NSA in February 1986, he worked in the Office of ELINT, analysing foreign radar emissions. He worked at Pine Gap for eighteen years, from October 1990 to October 2008.

When David first contacted me in early 2010 and told me about his plans to write a book about his assignment at Pine Gap, 'an insider's view of what really happens within the Facility's secure walls', I expressed my scepticism. This is the station that was originally called merely a 'defence space research facility', and which the Minister of Defence, Allen Fairhall, said in 1967 would not do 'anything of military significance' and in 1968 was only 'an experimental project … concerned with upper atmosphere and space phenomena'. Only in 1988 did then–Prime Minister Bob Hawke acknowledge that 'Pine Gap is a satellite ground station whose function is to collect intelligence data which supports the national security of both Australia and the US', and that 'intelligence collected at Pine Gap contributes importantly to the verification of arms control and verification agreements'. In fact, this statement by Hawke remains

the most informative official explanation of Pine Gap's purpose and role ever released. I thought that the intelligence mandarins in both Washington and Canberra would have apoplexy when they learned of David's intention.

Only one account of experiences at Pine Gap has previously been published by a former employee: an Australian, Leonce Kealy, who worked there from 1970 to 1975. Kealy's book, *The Pine Gap Saga*, referred to by David, is entirely different to this one. Kealy worked in the main computer room before Australians had access to the operational areas, and hence was ignorant of operational matters. His story is primarily about the conditions of service at the facility and the discrimination faced by Australian employees, a situation that changed in 1979–80. Since then the Australian staff have had full access to all operational areas, in what David describes as an 'extraordinary partnership' between Australians and Americans.

David stresses that this is a personal account, not a technical one. The reader is left with no doubt that he thoroughly enjoyed life in Alice Springs, participating fully in community events and charitable activities, and that he loved the natural wonders of the central Australian countryside—Uluru (Ayers Rock), Kata Tjuta (the Olgas), the flat-topped Mt Connor, Lake Amadeus, Kings Canyon, Simpsons Gap, Standley Chasm, Ormiston Gorge, and Emily Gap, just outside Alice Springs, the 'special meeting place' where he went for several years with his wife-to-be, Lou, when she visited him in Alice, and where he proposed to her in 2006.

Nevertheless, this is a revealing book. It describes not only Pine Gap's 'general intelligence-gathering functions' but also the role it plays 'in support of military operations'. When David arrived at Pine Gap in October 1990, two months after Saddam Hussein invaded Kuwait, the United States was preparing for military action against Iraq, eventuating in Operation Desert Storm in January–February 1991. Pine Gap is a part of the intelligence community, and he describes the role of providing intelligence through intercepts of electronic transmissions, which included identification of the location of leadership elements and weapons systems and which, coupled with imagery from both reconnaissance satellites and aircraft, provided important information about troop movements and, David believes, helped shorten the war and save the lives of many Coalition fighting men and women. He describes how monitoring the emissions of End Tray radars, co-located with mobile Scud missiles, enabled Scuds to be located.

David recounts searching for various leaders in Somalia in 1993–1994, including Mohamed Farah Aideed; intercepting Serbian military-related signals during the conflict in Kosova in 1998; the

interception of communications and weapons-related intelligence just before Operation Desert Fox in Iraq in December 1998; how intercepting the communications of Al-Qaeda leaders had become a high priority by 1998; how, after 9/11, analysts 'worked diligently assessing Afghanistan's weapon systems and communications networks'; and Pine Gap's concerns in the Gulf War in March–April 2003, including analysis of the signal characteristics of Iraq's GPS jamming systems.

Pine Gap's most important original function was to intercept the telemetry associated with the testing by the Soviet Union of new ballistic missiles and other advanced weapons systems in their development phase. After the collapse of the Soviet Union, it has continued to monitor the testing of Russian weapons systems. It has also provided important intelligence on the development by China of ballistic missiles, cruise missiles, and surface-to-air missiles. David includes a fascinating account of how technical analysis provided 'key insights' into China's development of airborne warning and control system (AWACS) aircraft. He also alludes to the role of the facility in monitoring nuclear and missile developments in North Korea.

In addition to the provision of 'national'-level intelligence and the support of military operations at the strategic and operational levels, there is sometimes also a personal dimension to Pine Gap's operations, as evidenced by its involvement to locate and assist the rescue of 'downed pilots' by intercepting the signals transmitted by their 'distress beacons'. On 6 June 1995, for example, four days after US Air Force Captain Scott O'Grady was shot down by a Serbian antiaircraft missile over Bosnia, his distress signal was detected; he was rescued two days later.

I remain amazed that David received permission to publish this story. He does not disclose technical details that might compromise the future effectiveness of Pine Gap and its remarkable satellites but he does relate a litany of activities that would previously have been regarded as being beyond 'Top Secret'. Publication was approved presumably because this is ultimately a great success story, not only in terms of operational achievements but also in terms of the 'extraordinary partnership' that has rendered it so successful.

All of this makes this book compelling reading. It is a subject redolent of mystery and secrecy. It involves the recounting of marvellous achievements and the depiction of an extraordinary working partnership by someone who worked at this exceptional facility for nearly half the period since it became operational. But it is more than just a great read. It is also represents a substantial public service, providing the material that permits an informed public discussion of the value and merits of Pine Gap's operations.

PROFESSOR DES BALL

CANBERRA, MAY 2011

PRIME MINISTER RJ HAWKE:

'Pine Gap is a satellite ground station, whose function is to collect intelligence data which supports the national security of both Australia and the US. Intelligence collected at Pine Gap contributes importantly to the verification of arms control and disarmament agreements.' (November 1988)

OPPOSITION LEADER JOHN HOWARD:

'…the Liberal and National parties have always adopted an attitude of unwavering support for the joint facilities between Australia and the United States… This agreement is one of those things that sits at the very pinnacle of our national defence and our national security.' (1988)

LTG KEITH ALEXANDER—DIRECTOR NSA/CHIEF CSS

'The majority of our nation's intelligence for counterterrorism, hard targets and support to military operations comes from the National Security Agency / Central Security Service. For the good of the nation, it is imperative that NSA/CSS maintain its cryptologic superiority.' (NSA website, 2010)

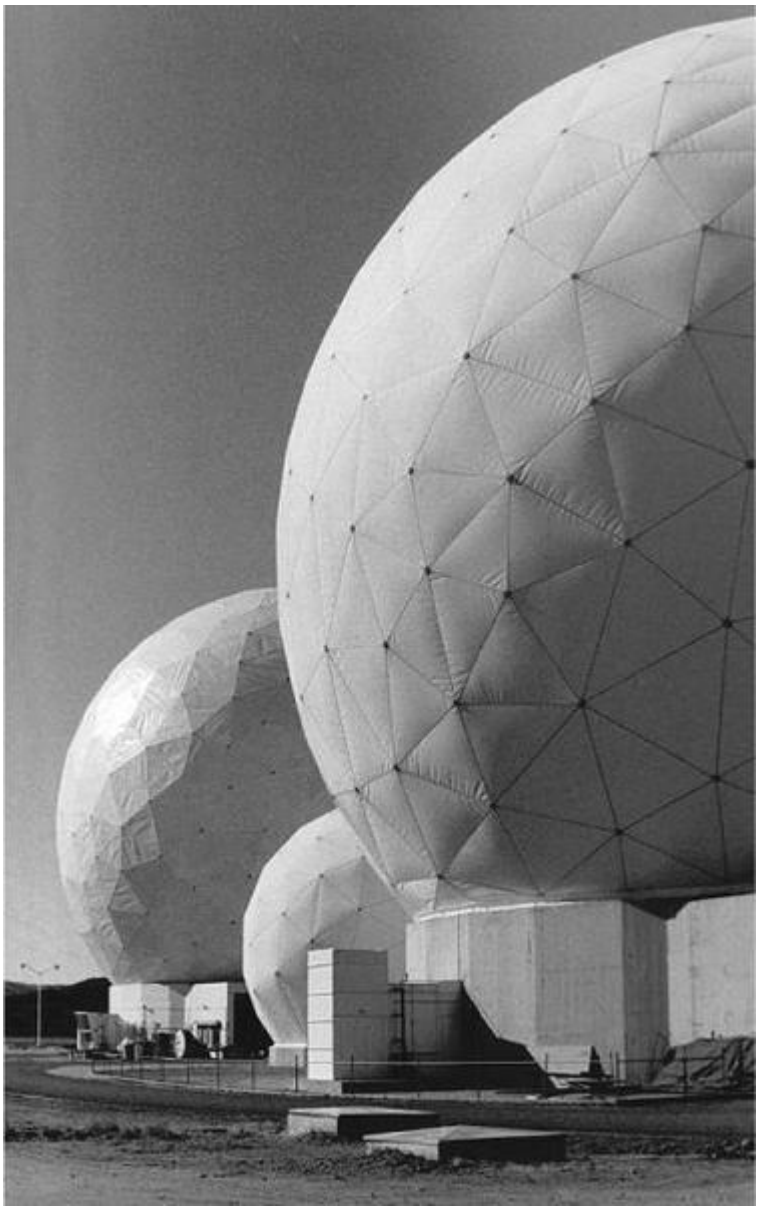
DISCLAIMER FROM THE NSA

The views and opinions expressed herein are those of the author and do not necessarily reflect those of the NSA/CSS. Furthermore, NSA/CSS does not warrant the accuracy of any information the author has included regarding the Agency, its alleged activities, personnel, operations, physical description or organisational structure. Open sources cited in this book serve to provide background, amplify references, or introduce related information, but not all details in the 'open' citations may be accurate.

DEDICATION

I dedicate this book to Louise—wife, mother, and singer extraordinaire

PREFACE: NARROWING THE GAP



Pine Gap's famous radomes

'They will never let you write this book, let alone publish it.' So said colleagues, family and friends, and they were almost right, but how could I resist telling the story of my unique twenty-three-year

career as a hi-tech spy for the United States' most secretive spy agency, the National Security Agency (NSA)? If I'd had any idea of the censorship challenges I'd face, I might have thought twice about writing this book. While I knew it would ruffle some feathers at the NSA, concern about what I might divulge eventually spread beyond my own agency to two other intelligence organisations. Apprehension about the sensitive information I might reveal even reached beyond the borders of the United States to the higher leadership of a close foreign ally that I'd become a citizen of in 2009: Australia.

I had already been employed with the NSA at Ft Meade, Maryland for more than four years when I decided to accept an initial two-year assignment at one of the most remote locations on Earth—the small outback town of Alice Springs in Central Australia. I remained there for eighteen years until I voluntarily resigned at the end of my extended overseas tour to move to Sydney to be with my wife, by which time I had been employed at Pine Gap longer than any other NSA employee still stationed in Alice Springs.

The year 2010 marked forty years since Pine Gap became operational as a joint defence facility,[1] and I believe it is timely to provide an insider's view of what really takes place behind its secure walls. I'm also keen to correct some misperceptions and false claims that have been made about 'the Base'.

Pine Gap, also known as 'the Space Base' by Alice Springs locals, is an intelligence collection facility jointly administered by the United States and Australia. After forty controversial years it's become a recognisable part of the Australian landscape, but the mission is still so highly classified that every employee who works in the secure building requires a 'Top Secret' security clearance just to enter the front door.

Along with that security clearance comes a lifetime commitment from me to refrain from revealing information that would compromise the security of the United States and to submit to the NSA's Pre-publication Review Board (PRB)[2] any work that is intended for publication that may contain classified information. This process ensures classified sources and methods of intelligence collection and analysis aren't inadvertently disclosed—obviously such information must remain classified in order to preserve the intelligence collection capabilities of a vital part of the worldwide intelligence community,[3] which includes the Australian intelligence community. I have done this while working with the PRB, which is tasked to balance these security concerns with an author's right to freedom of speech.

At the direction of the PRB some text has been redacted (blacked-out) to prevent disclosure of classified information.

My extended tour of duty at Pine Gap has put me in a credible

position to explain the facility's mission and the role of its technical operations, while many so-called 'experts' who have written about the Base actually have only second- or thirdhand knowledge of the mission. Until now, nothing has been previously published exclusively about Pine Gap by anyone who has held the necessary security clearance that authorises them to work inside the top-secret signal processing centre, Operations. In 2008 Leonce Kealy, a former RAAF Australian employee, published an account of his time there from 1970 to 1975—*The Pine Gap Saga: My personal experience working with the American CIA in Australia*.[4] But Kealy's book is a historical and somewhat jaded discussion of the 'Genesis' period at Pine Gap—when Australians were reportedly not admitted into the secure signal processing centre—so is very limited in its ability to discuss the classified mission. Here, however, I expose many current 'revelations' and relate some of the major highlights involving the Australians and Americans who worked with me in Operations, the intelligence collection and analysis 'nerve centre' of Pine Gap.

My career with the NSA allowed me to access some of the United States' most sensitive compartmented secrets—in other words, specific programs in which select individuals may participate and access information. This enabled me to learn about, understand and analyse the military capabilities of several countries that potentially pose a threat to the United States and Australia. My exposure to this information and participation in assessing these threats have familiarised me with a multitude of weapons systems and their associated development and testing methodologies.

Based upon my personal experience in Operations, I have cited a number of 'open sources' in this book. The reader should be aware that while these citations serve to provide background, amplify references, or introduce related information, not all of the details in the 'open' citations may be accurate. For example, it's been well documented that the United States intelligence community collects and analyses telemetry, radar signals, weapons-related signals, communication signals and satellite/data link transmissions.[5]

In this book I expose, examine and explain the various types of intelligence relevant to Pine Gap, and will provide an account of some of the intelligence successes and failures experienced by the Americans and Australians over the course of my eighteen years 'on the inside'. The strong forty-year partnership between Australia and the United States at Pine Gap has resulted in a closer alliance, one that has narrowed the gap between America's and Australia's technical capabilities and the Australian and American cultures in Alice Springs. My reflections, after twenty-three years as a hi-tech spy, will debunk some of the myths and rumours surrounding Pine Gap, including

concerns voiced by many anti–Pine Gap protest organisations and other interest groups.

In addition to general intelligence-gathering functions, Pine Gap also played a role in support of military operations; so, as this book is primarily 'Pine Gap-centric', rather than discuss the conflicts in detail, I emphasise the role the facility played in the various conflicts, including the first and second Iraq wars, the Balkan conflicts of the 1990s, and Afghanistan. There are numerous publications detailing operational campaigns that occurred during these conflicts, but the role of Pine Gap in each has not been previously revealed.

In writing this book, I have not invented any characters, locations or operational scenarios, although some stories required the omission of the names of actual people, or the substitution of fictitious names, and this is indicated explicitly for the reader. I have also avoided technical jargon and mathematical concepts, and have referenced other publications where appropriate, including Professor Desmond Ball's highly technical work *Pine Gap*.[6] So when I refer to Pine Gap 'controlling a small number of US geostationary signals intelligence satellites' and the ability of Pine Gap 'to collect a wide range of foreign signals, including telemetry associated with Soviet strategic missile tests, radar emissions, and telecommunications…'[7] I urge the reader to see the applicable endnote and any other open sources for additional technical information.

Perhaps the function of the Base is best expressed in the words of Victor Marchetti, former CIA employee and author of *The CIA and the Cult of Intelligence*, when he writes that Pine Gap satellites are capable of '"sucking up like a vacuum cleaner" a wide spectrum of telemetry signals, military, diplomatic and other communications and radar emissions and beaming them back down to the ground control station at Pine Gap'.[8]

I have often been asked why Alice Springs was chosen as the location to control the satellites. Open-source documentation states:

> To minimize the satellite's weight, its size, and its power requirements, encryption systems were never installed. Thus it was essential to keep the Soviets as far away from Rhyolite's downlink as possible. If a SIGINT trawler, such as those off Guam and Cape Canaveral, or a listening post, like the one in Cuba or one within an embassy, were able to tap into the beam, the USSR would discover how NSA was eavesdropping and would take countermeasures… The reason they put it in Alice Springs was because they didn't want the Russians to know what the satellite was sending down. By placing it in Alice Springs, the 'footprint' [of the

> signal] was small enough so that you couldn't eavesdrop on it outside Australia. They didn't want the Russians hearing it from their trawlers. Once completed, the NSA base at Alice Springs was named Pine Gap.[9]

My time in Operations, from 5 October 1990 to 5 October 2008, spanned a tumultuous period in history that covered the terms of three American presidents, four Australian prime ministers, two wars in Iraq, a formal end to the Cold War, a peace treaty between Israel and Jordan, genocide in Rwanda, war in the Balkans and a tragic peacekeeping mission in Somalia. It was also a time that saw the destruction of the World Trade Center buildings in New York and the terrorist attack on the Pentagon in Virginia, the subsequent so-called 'war on terror', and the emergence of a new nuclear-armed nation, North Korea.

During this period I held a United States Government Top Secret Sensitive Compartmented Intelligence (TS-SCI) security clearance.[10] This is the highest level of clearance granted by the United States Government and is indicative of the amount of trust bestowed upon me. Holding this clearance allowed me to work closely with some of the most brilliant minds within the intelligence community and enabled me to use the most sophisticated equipment and computer programs to produce and report intelligence required by the American and Australian leadership and policymakers. The security clearance also gave me the authority to access highly secret reports and documents within the United States Government and allowed me insight into Iraq's 'Weapons of Mass Destruction' (WMD) program and intelligence concerns of weapons proliferation around the world, particularly weapons development and testing. I'm proud to say that the Operations team I worked with was instrumental in saving the lives of Americans and Australians engaged in military operations, which has been acknowledged by the leadership of both countries.

Part of my aim in writing this book has been to reveal the extraordinary partnership that exists at Pine Gap between the governments of Australia and the United States. Our similarities, kinship and genuine affection for our respective cultures have resulted in an unbreakable bond. Australians and Americans may not agree on every issue, but if one country is threatened, I believe the other will always stand alongside, brothers-in-arms. While many Australians have historically resisted the presence of Pine Gap and the Americans who work there, I hope this book can change some viewpoints as to why this relationship is not only necessary but also beneficial to the security of Australia.

I am privileged to have worked with many talented Australian

and American men and women, soldiers and civilians. It has been an honour to remain quietly in the background, working to protect our soldiers while they served in some of the world's most dangerous places.

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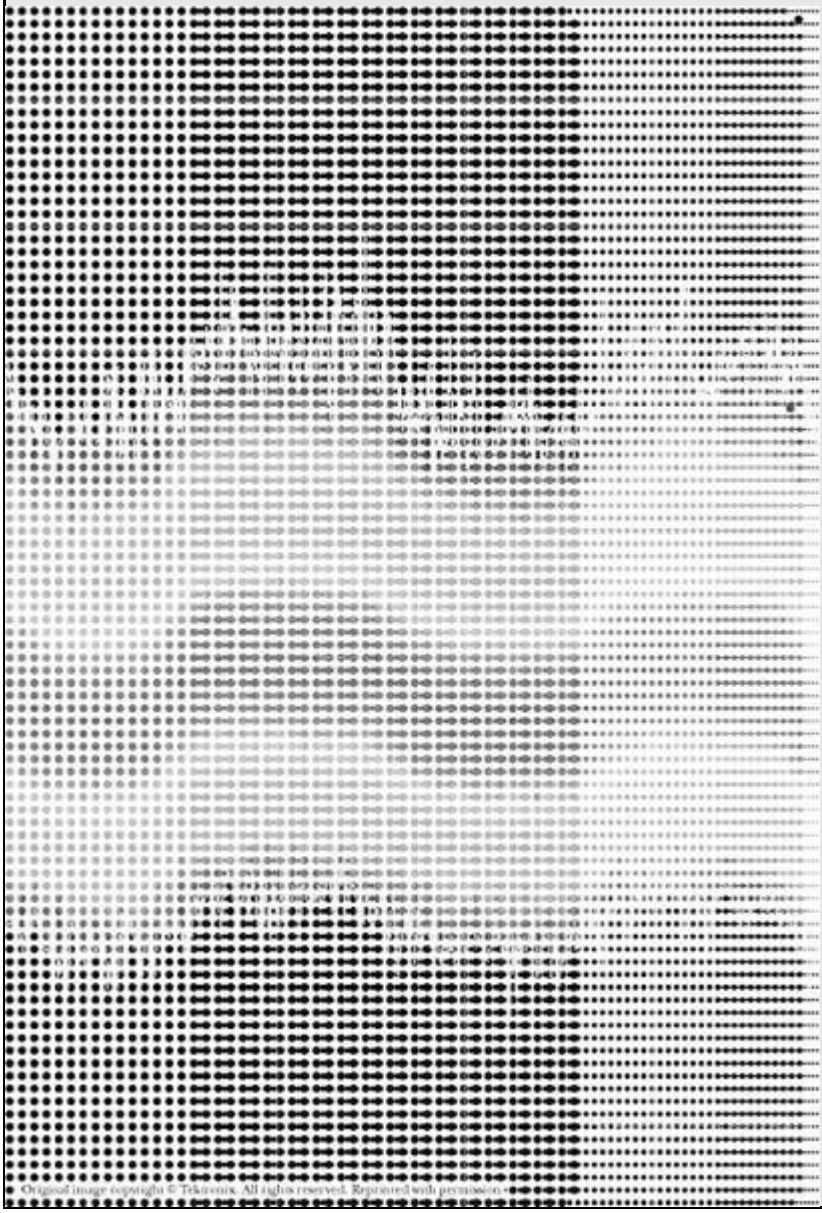
PART I:

GETTING IN



1: WHO AM I?

NSA headquarters, Ft Meade, Maryland

Like most American children growing up in the 1960s, television was a significant part of my life. Thanks to popular shows such as *Mission: Impossible*, in which mysterious government agents used hi-

tech devices to eavesdrop on America's enemies and thwart their activities, television helped glamorise security agencies and fostered a real sense of patriotism. To me, there was something irresistible about these eavesdropping government agents and the work they did to catch the 'bad guys'.

At school in North Miami, Florida, my favourite subject was mathematics, and I enjoyed learning about electronics and building various radios from the do-it-yourself kits available in hobby shops. After graduating from high school I wasn't sure which career path to take, but was technically oriented so I decided to enrol in electrical engineering at the University of Florida in Gainesville where I was accepted into the winter class in January 1981.

I graduated three years later with a Bachelor of Science degree but decided to stay on for postgraduate study, taking more maths and astronomy courses. Electrical engineers were in strong demand and I particularly enjoyed the mathematical applications involving antennas, communications systems and radio wave propagation. It had also become quite a competitive field as technology advanced and innovation created more opportunities for those with electrical engineering expertise—particularly when the first personal computers and computer games began to appear. I enjoyed my classes and my professors, and made many friends while at university. Eventually, though, I decided it was time to join the □□□ and put my degree to use, so I returned home to my still-working single mother in North Miami to compile my résumé (my father had died of cancer two days before my eighth birthday in 1967).

I started by buying a copy of the *Peterson's College Placement Annual for Engineering and Physical Science Majors*, which listed companies and job descriptions for graduates. I then applied to about thirty engineering companies around the United States and some government agencies such as the Defense Mapping Agency, Central Intelligence Agency (CIA), the Secret Service and the NSA. For all these applications, only two organisations wanted to meet me: the CIA and the NSA. Perhaps it was because I'd never undertaken any work-study while at university, instead choosing to unwind from semesters of intense study working over the summers with friends at a camp for children at Camp Blue Ridge in Mt City, Georgia.

Working for either the CIA or the NSA was an exciting prospect and secretly a lifelong dream, but before I applied to these agencies I had also applied for an interview with the Federal Bureau of Investigation (FBI) through an advertisement in the *Miami Herald*. The FBI was recruiting for the prestigious position of special agent. I knew the process would be highly competitive but actually the initial interview was relatively easy: a group of about ten of us performed

various tests that assessed our reaction to guns and how well we handled them. For example, we were evaluated on how many times we could pull the trigger on a handgun in thirty seconds and how steady we could hold and aim a rifle. Our recall ability was evaluated by showing us a picture, removing it, and then asking us questions about what was in the image. I found out I'd done well when I received a phone call asking me to return for a second interview.

I met with a special agent in the Miami office for a formal interview designed to determine my suitability for the FBI. I was asked questions about my parents, friends and others I associated with—clearly the Bureau was concerned about people who might be potentially undesirable foreign nationals. So far, so good, as I didn't have any friends from Russia, Libya, Iran, China, Cuba or any other communist country. But then we hit a roadblock when I was asked about any illegal drugs I'd taken. In college I had occasionally smoked marijuana with friends. The special agent, a man close to fifty, asked how many times I had smoked pot. I responded that a conservative estimate would be around twenty times. He told me the acceptable number was ten, so since I'd clearly exceeded the limit I was immediately excluded from becoming a special agent.

When I asked my interviewer why smoking pot more than ten times excluded me, he responded with something like, 'Imagine you're a special agent and you arrest someone for illegal drug use. In court, that person's lawyer will ask you whether you have ever used an illegal drug. You will have to answer "Yes". The lawyer will then ask how you could arrest someone for the same offence you've been guilty of.' Listening to his explanation, I realised he wasn't going to allow my application to proceed. His logic didn't entirely make sense to me—what about police officers who were guilty of speeding but still issued speeding tickets? And I couldn't help but wonder what his response would have been if I'd said I'd only smoked pot nine times. Regardless, although I knew that I would have made a very competent special agent, I thanked him and left.

I was now down to two choices: the CIA and the NSA.

Most Americans had heard of the CIA, but I wasn't very familiar with the NSA. After researching both agencies and learning more about the secret work they did, I felt I'd be happy in either since both used special electronic devices and satellites designed to spy on America's enemies. The CIA probably appealed more to me, at least initially, simply because I'd heard of the organisation and it had a more sophisticated and 'sexy' reputation than the NSA.

In early 1985 I took the next step towards working for the CIA, completing a written evaluation at a university campus in Miami as

part of the agency's pre-selection process. The classroom held about thirty to forty people, many of whom were Hispanic but most appeared to be Anglo-American. The written assessment was filled with general aptitude questions in three different sections.

I learnt that I'd passed a month later when I received the thick CIA application in the mail. Most of the paperwork consisted of a Personal History Statement—Part 1, the Position Application, and the Personal History Statement—Part 2, the Clearance Application, copies of which I've kept to this day. I had to account for my entire life in this paperwork, including the position I desired, where I was willing to work, typing skills, foreign travel history, foreign language ability, hobbies, family history, former residences and personal references. I had to provide my education history, including whether I worked while attending university, my Grade Point Average (GPA) in my major, senior year and overall, why I chose my major, and which courses I liked best and least. The list went on. It also asked for my employment history, why I wanted to work for the CIA, other careers I had considered, current employment duties, and my area of expertise. Other interesting questions were: 'How do you spend your leisure time? What books or periodicals do you read regularly? What is your principal asset? What is your principal shortcoming?' And, my favourite, 'Who are you?' Finally, I had to write a description of my personality.

There was also a Writing Skills assignment that required me to author a paper of 500 words or more on a subject of major current international interest. I wondered what subjects would appeal to the CIA. Perhaps essays that presented ideas on how to 'neutralise' some of America's perceived enemies? After contemplating the subject for a couple of days, I decided to write about a part of the world the CIA was undoubtedly very interested in: the Middle East. Seventeen months earlier, Islamic Jihad had claimed responsibility for the Beirut barracks bombing that killed 299 servicemen, including 220 US Marines.[1] I chose to write about the political and social instability in Beirut and the religious, political and class conflicts that were all factors in a country that was very close to experiencing anarchy. After examining the causes of the crisis in Lebanon, I pointed out that there were two regional leaders who were responsible for fuelling the emotions of the populous and who should be considered in any proposed solution. Reading it now, twenty-five years later, I am struck by how Lebanon has still not managed to establish a unified identity and continues to be strongly influenced by outside forces. In some respects, time has marched in place, not forward.

I submitted my voluminous application to the CIA in March 1985 and waited for its reply. Two months later I received a letter telling

me the agency wanted to meet with me in Virginia.

In August, the CIA flew me to its headquarters in Langley, Virginia—the same address I knew from television and movies—for a relatively simple interview. When I passed the security checkpoint and was directed to the visitors' parking area, I could barely believe I'd actually been allowed into one of the world's most secretive spy agencies.

I was amazed at the size of CIA headquarters. It was an impressive building with an immense entrance hallway, and as I glanced across the room I noticed a large granite CIA seal on the lobby floor and block letters etched in stone on the wall. Moving towards the letters I read the biblical quote from John 8:32: 'AND YE SHALL KNOW THE TRUTH AND THE TRUTH SHALL MAKE YOU FREE.' As I looked around the room my eyes were drawn to the Memorial Wall, which contained many stars, each representing a CIA officer who had made the ultimate sacrifice. I felt an overwhelming sense of pride in my country and for those who had served with such dedication and heroism. I knew then that I desperately wanted to be a part of this community.

Soon my tour began. My engineering degree meant I would most likely be assigned to the Directorate of Science and Technology (DS&T). My escort, a man in his late twenties, took me into a meeting room and asked me questions about myself and the type of work I wanted to do. My tour to the various DS&T offices was prearranged and we were soon on our way to the research and development areas where the CIA created many of its most secret spy toys. When I entered each secure area my escort loudly announced 'Uncleared visitor' and black cloths were hastily thrown over the classified hardware that engineers were developing and testing.

My escort took me to two other sections, where I spoke with some engineers who gave me a rudimentary overview of the work they did. This gave me an idea of the types of positions available to me if I were successful with my application. When the tour and interview were over, I drove to the airport and boarded my plane, thinking how exciting it would be to work for the CIA. But I had to wait to find out whether I had advanced to the next stage in the hiring process.

In the meantime, while my CIA paperwork was being processed, I submitted an application to the NSA. The format was very similar, though it didn't involve writing an essay. Luckily for me, I was an attractive prospect for both organisations at a time when President Reagan was encouraging the various agencies to employ engineering graduates. President Reagan had decreed he wanted to modernise the government workforce, which was heavily reliant on contractors to

perform much of its specialised technical work. He wanted to have that expertise in-house, figuring it would make the government less dependent on the more-expensive contractors.

In the spring of 1985 I received a letter from the NSA requesting an interview and inviting me for pre-employment processing in Maryland. I felt confident about my prospects, knowing that two government spy agencies were still interested in me, so I booked a flight for two days of interviews.

I stayed at a hotel in Linthicum at the Friendship Annex (FANX) complex, which was across the street from the FANX 3 building where the NSA conducted its Electronic Intelligence (ELINT) signals analysis processing. ELINT was all about processing and analysing non-communications signals, mostly Radio Detection and Ranging (RADAR, or radar), but also included machine-to-machine transmissions such as Identification Friend-or-Foe (IFF) signals used by aircraft. My maths skills and engineering degree were suited to this type of work and I soon learned that the agency wanted me to work for it as an ELINT signals analyst.

The NSA interview was more comprehensive than my interview with the CIA. This time my escort, another relatively young man in his twenties, took me to a conference room where we discussed my interests and what I could expect if I chose a career with the NSA as an ELINT analyst. He explained the training and travel opportunities, and how I would represent the agency at international conferences. When we finished our discussion we walked over to the ELINT analysis area, where I was given a tour of the National Signals Analysis Centre (NSAC) laboratory. I saw the black cloths covering the classified equipment, as at the CIA, and I noticed many analysts looking at oscilloscopes as very large tape machines were stopped, rewound and played again. The work looked intriguing and I asked many questions about radars that unfortunately couldn't be answered due to the classified nature of the work.

My escort continued showing me around the FANX 3 building, describing some of the other types of analysis and how signals were initially identified, then assigned to the various analysis sections. I became eager to learn more about this type of work and could clearly see that ELINT would not only be a challenge but would offer me an exciting career as well. When we finished the tour I walked around in the early autumn evening before going back to my hotel, anxious about what was in store for me the next day when I was scheduled to take the dreaded polygraph test and meet with the agency psychologist.

The following morning I went to NSA headquarters at Ft Meade, signed in at the security checkpoint and reported to the medical wing.

I was scheduled to undergo extensive psychological testing and a routine medical examination to determine whether I was mentally stable and could handle the pressure of working in a job where secrecy surrounded everything I did.

The psychological profiling included answering a list of more than 300 multiple-choice questions, several of which were repeated to determine whether I was consistent in my answers or was prone to lying. The questions were mostly subjective, such as 'I like to socialise: true or false', but some appeared to be designed to extract elicit information about any 'darker' side I might have. The one that stood out from the rest was, 'I have weird thoughts: true or false'. I remember staring at that question and thinking, 'This must be a trick question. What do they mean by "weird"? If I answer "No", the psychologist might tell me I must have had at least one weird thought in my twenty-six years. He might think I was lying or trying to cover something up. If I answer "Yes", he might ask me to explain what my weird thoughts were.' What could I say? My mind was racing.

This question seemed to put me in a lose–lose situation, so to play it safe I decided to answer 'Yes' because I wanted to make it clear that I had nothing to hide, but I hoped I wouldn't have to elaborate on what my weird thoughts were. Sure enough, when I met the psychologist this was the only question he returned to. He asked me three times what my weird thoughts were, coaxing and prodding for more information. In the end, all I could do was apologise and say, 'I just can't think of any specific weird thoughts right now. Maybe I have had some in the past, but I can't recall any at this time.' Eventually he appeared satisfied with my answer, so he changed the subject and asked me about my sexual orientation. Perhaps that was what he'd been getting at all along.

In 1985 homosexuals weren't allowed to join the agency or obtain the required security clearance. The reason, from what I was told, was that homosexuals could be subject to blackmail and thus were more likely to divulge secrets. 'But if I told you I was homosexual, what could they blackmail me for?' I asked. He looked at me as if I were a naïve child, saying something similar to, 'Homosexuals are more at risk of divulging classified information because of threats that can be made against them after being targeted by a foreign intelligence service. We could be aware that an employee is homosexual, but they could still be blackmailed by threatening to expose their homosexuality to family and friends.' My response was quick and easy. 'No, I am not homosexual.' He noted this on my paperwork and I left his office soon afterwards, wondering if similar questions would be asked at my impending polygraph test.

My polygraph was the last appointment of the day. I'd never

taken a polygraph test before and this one was going to be both a lifestyle test and a counterintelligence (CI) test. I knew that almost everyone got nervous when the polygrapher hooked up the sensors that monitor blood pressure, pulse, breathing rhythm, and skin conductivity (an effect of sweating). I also knew I had nothing to worry about except the pot smoking in college, which I wasn't overly concerned about because I'd already disclosed it in my NSA application. (I would later sign a document stating that I wouldn't take any illegal drugs while employed by the NSA.)

My test began with lifestyle questions such as, 'Have you ever shoplifted? Do you have a girlfriend? Have you ever used illegal drugs? How often do you have sex? Are you a homosexual? Have you ever committed a weird sexual act?' (There was that word 'weird' again.) The CI test consisted of questions along slightly different lines: 'Are you a communist? Have you ever committed or thought of committing a terrorist act? Have you ever been blackmailed or been involved with blackmail? Have you ever thought of committing espionage?' The questions were all easy for me to answer, and I wondered whether anyone ever 'confessed' to a polygrapher that they had wanted, at some time in their life, to commit espionage or take part in a terrorist act against the United States. I wouldn't be surprised to hear that the agency has had to deny employment at one time or another to some individuals who've had these somewhat over-zealous career goals.

When I finished, the male polygrapher, who resembled my idea of an accountant rather than a 'spook', asked me to relax as he left the room. After about five minutes, he returned and said that he needed to ask me a few more questions. (I would find out later that the agency wasn't happy with how I'd responded to the drug-related questions.) The questions were repeated and when I finished I was told the agency would let me know how I did within two weeks. I felt I'd done well as I was honest with all my answers, and as I flew back to Miami my only concern was the nervousness I'd felt when answering the drug questions.

Two weeks later I received a letter from the NSA telling me I needed to fly back to Maryland and complete another polygraph as I'd failed my first test. I was pretty depressed about the result, but made the flight arrangements and was back in Maryland the following week. I went into the same polygraph area but this time a female polygrapher conducted the test. She told me that they weren't satisfied that I'd disclosed all of my previous drug use. I reassured her that I'd been honest and was ready to take the test again.

When we were finished she left the room only to return a few minutes later to tell me she needed to repeat some questions. After

which she again left the room, returning shortly to ask me even more questions. Now I was really beginning to get nervous! Why were they asking me the same, mostly drug-related questions over and over? But I was also becoming a bit of an expert at answering the questions, and was always consistent in my responses. We soon finished up and I was told I'd receive the results after I returned to Miami.

About a month passed and I still hadn't heard anything from the CIA, but I soon received yet another request from the NSA for me to take a third polygraph because the second test had also ended in failure. Though the results were obviously discouraging I was also optimistic: the agency's willingness to fly me back for two additional tests clearly meant it was seriously interested in hiring me.

So in October I found myself back in now-familiar territory at NSA headquarters. I knew the drill and was soon in the polygraph room, hooked up to the wires with a male polygrapher conducting the interrogation. The same questions about drug use came up and I answered them calmly, smiling just a bit to myself as each question was asked—I believed this technique would reduce any nervousness I'd felt on previous occasions. I suspected this was the last chance I'd get to take the test, believing a 'three strikes and you're out' rule probably applied. As usual, when the questioning was over the polygrapher excused himself and left the room. But this time, when he returned, he told me the results looked good. I was elated and was hopeful that I had finally passed.

A month later, as luck would have it, I received a letter from the CIA offering me employment at the government grade/step level of 7/4 (see Appendix C), which was on the higher engineers' pay scale and was typical of what the CIA offered recent graduates with a Bachelors degree. The annual salary was $26,627 (approximately US $53,000 in 2011). This was significantly more than I had ever earned and I was ecstatic knowing the opportunity to work as a hi-tech spy for the CIA was now a very real possibility. I didn't have to accept the offer right away as it was contingent on passing a screening process that involved medical, psychological and polygraph testing as well as a background check. In the meantime I was asked to remain discreet about my possible employment, even to the point of not including my name on its return envelope.

Unfortunately, the CIA's letter made it clear to me that I had one unpleasant task to perform: I had been dating a beautiful girl from Colombia, but I knew I had to break up with her because I would probably be moving to Virginia and she was a foreign national. I explained that the government agency that wanted to hire me had concerns about security-cleared employees dating non-American citizens, and that such relationships meant answering numerous

questions and filling out extensive paperwork. When we met, she'd told me she was separated from her husband, whom she described as a 'hot-blooded Puerto Rican with a motorcycle and a gun'. She was so stunning that I'd been willing to risk an encounter with an angry, estranged husband with an itchy trigger finger, but since she wasn't a United States citizen, and since I was probably going to leave North Miami very soon, I knew the time had come to end the relationship. Neither of us was happy about it, but I have to admit that I did breathe a bit easier now that I had one less gun in my life.

The new year started off with good news: I received a letter from the NSA offering me a job (see Appendix D). I'd passed my third polygraph test! The agency was willing to employ me at the government grade/step of 7/8—even better than what the CIA had offered, with a salary of $27,328. My background investigation had already been completed by the Defense Investigative Service (DIS) and many of my friends had related how they'd been interviewed by 'some guy from the government' asking questions about my loyalty, drug use and, of course, whether I was homosexual.

I now had a decision to make. The CIA was still conducting its background investigation and I didn't know how much longer that would take. I thought about the people I'd met at both agencies and the descriptions of the jobs I'd been offered. The people at the NSA seemed friendlier, and more organised when it came to my pre-employment processing—in spite of my three polygraphs—and the work in ELINT analysis was more tempting to me than building and testing new hardware. Also, the opportunity to use my maths skills in ELINT appealed more to me than using my training as an engineer for the CIA. My mind was soon made up: even though the NSA was relatively unknown to the rest of the world, I decided to accept the job offer and agreed to report for work on 24 February 1986.

The NSA asked me to tell only my immediate family and closest friends about my employment, and to tell them not to share the news with anyone. I had expected this. If asked, my family, friends and I were to say that I worked for the Department of Defense. (I later learned that if a civilian told you they worked for the Department of Defense, that vague term often meant that they worked for the NSA.)

I had one month to make arrangements for the move from North Miami, find a place to live and prepare myself for the new experience of living in the cold and snow that awaited me in Maryland. My family and friends celebrated with me and while I knew I would miss them, I was excited about beginning my secretive career as a new government hi-tech spy. Although I didn't know exactly what my job would be, I was keen to get behind the scenes and start doing important work for my country. I was confident I'd made the right

choice. In the end it seemed fortuitous, inevitable even, that my applications to private industry hadn't been successful. I recalled my childhood love of *Mission: Impossible*, and its introduction seemed to ring in my head: 'Your mission, Jim, should you decide to accept it'… I did, indeed, eagerly accept my own impending mission with the NSA.

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2: THE NEW RECRUIT

The author at the Berlin Wall

In late February 1986 I drove up to Maryland and booked myself into a hotel in Laurel, where I would stay until I found a one-bedroom apartment called Foxfire. Heavy snow covered the city, and driving

safely on ice took some practice. I had arrived a few days before I was scheduled to begin orientation and I spent the time learning my way around town and finding my way to work.

The only people I knew in Maryland were my cousin Ken and his wife Marjorie, who lived with their children in nearby Chevy Chase. Ken was in the news business and later became a vice-president of CNN. Marjorie would become the commissioner of the New York Commission for the United Nations, Consular Corps and Protocol. She is also the sister of the current governor of New York, Michael Bloomberg,[1] thought to be a possible future presidential candidate. I spent many weekends with Ken and his family as they helped me settle into my new life.

On my first day at NSA headquarters I received my green Top Secret picture badge, which allowed me access to any building in the NSA complex. After completing some routine HR paperwork I joined an orientation class with about thirty new employees—a mixed bunch of engineers, secretaries, linguists and administrative personnel. Two agency trainers provided an overview of the history of the NSA, the work performed by the agency and examples of espionage cases involving the NSA, including that of Ronald Pelton,[2] an NSA employee recently arrested for spying for the Soviet Union.

'You don't want to end up like Ronald Pelton,' our instructor told us.

The NSA is responsible for the collection and analysis of foreign signals intelligence and communications, and we were shown some of the ways the agency accomplished this task. Many foreign signals are encrypted and require a specific mathematical key to decrypt the information. Finding the key is the art of cryptanalysis (code-breaking, in layman's terms). The NSA is also responsible for protecting United States Government communications and information systems. The practice of hiding information is called cryptography, used with familiar devices such as ATMs and credit cards.

The NSA-administered National Cryptologic School (NCS) is responsible for providing training to employees in subjects such as cryptanalysis, cryptography, mathematics, non-technical subjects, and the various signals intelligence (SIGINT) disciplines.

The NSA primarily analyses and reports on communications signals (COMINT), electronic signals such as radars (ELINT), and

In addition to these specific weapons, there are many additional types of weapons that are telemetered as they advance through their testing and evaluation phases. This last category of telemetry signals analysis was designated 'foreign instrumentation signals intelligence' (FISINT). The NSA does its work only by electronic eavesdropping and doesn't

have field agents overseas. Gathering intelligence from a human source, through covert and overt collection techniques, and open-source data from foreign media, is the CIA's role. But it is the NSA that is the heart and soul of the greatest electronic signals collection and analysis operation in the world, with representatives in diverse geographic locations such as South Korea, Japan, Britain, and Australia.[3] Its budget reportedly dwarfs that of the CIA. The orientation class shed much light on how the NSA operated, and now that I had my security clearance I was able to hear and read about much of the classified work this enormous agency performed.

While I was in orientation class an event that would have particular personal significance occurred. I was looking around the room at my colleagues and noticed one particular young lady occasionally looking at me when I glanced at her. I spoke with her later and we seemed to have much in common. She told me she was from the nearby town of Glen Burnie and would be managing contracts between the agency and contractors. I later found out that the NSA didn't restrict dating among agency employees since we had all passed the rigorous security clearance screening process. We began dating in March, and having a local girlfriend meant that I immediately developed a new circle of friends and a busy social life. Settling into my new life became easy, and after a whirlwind romance, we married nineteen months later.

The technical members of my class, of which I was one, spent the rest of our orientation learning about 'traffic analysis'—deducing information from patterns in communications such as how often communication occurs between stations, who speaks to whom, and changing of the transmission frequency (for example, from 200 MHz to 205 MHz). We also performed basic decryption of sample messages to determine whether we had certain aptitudes that the agency could utilise.

When orientation was over I was assigned to the Office of ELINT, designated W2. The agency is broken down into alpha-numeric designators; for example, the Russian division was designated 'A', with various offices concerned with specific Russian issues designated by a number that followed 'A', such as A1, A14, A2, and so on. My office was several kilometres from NSA headquarters and was home to the NSAC facility, entrance to which required an additional metal security badge.

My branch, W22, worked with known ELINT signals—those signals whose function and country of origin had been identified. A separate office, W34, analysed newly intercepted or unidentified signals, and once they had established the function and country of origin of a new signal it was passed to W22. In W22, I received several

additional compartmented security clearances, including some 'very restricted knowledge' (VRK) clearances that would allow me access to the radar signal data I needed to perform some of my work. One of these compartmented levels was the SCI clearance needed to access and utilise intelligence obtained from highly classified sources. This level is coveted by contractors who perform the government's most highly classified work and, as a result, they often 'poach' many government workers who have this clearance, often luring them with the offer of a higher salary.

At this time President Reagan had already begun his effort to hire engineers into the intelligence agencies by making salaries more competitive with the private sector (most engineering, physics and mathematics graduates went into private enterprise). His strategy worked, so when I arrived in W22, I was surrounded by a cadre of young engineers who were assigned a variety of radar signals, primarily those signals that originated from the communist bloc.

Each analyst was assigned signals related to a specific type of radar. This could be airborne surface-to-air missiles (SAMs), land-based radars (such as early warning and air traffic control) or over-the-horizon (OTH) radar signals. The job was to analyse and report any new signal parameters their radars displayed. The military wanted to know whenever a radar's capability to detect targets had improved so that enhanced countermeasures could be developed and implemented to defeat the threat posed by an associated weapon system. As an analyst in W22, I would assess the performance of various radars and report new signal parameters.

The agency also had a large number of military and retired military personnel working side by side with the civilians. Their expertise and experience were highly valued by those of us who entered the unfamiliar world of radars and ELINT. With training from seasoned analysts, the new recruits quickly learned how to identify and report new signal parameters, and I was able to master the techniques quickly and was soon training new analysts.

I received additional training in radar theory from the NCS and supplementary courses were taught by contractors and local universities such as George Washington University. This was coupled with training in the lab using data that was intercepted by various collection sites. The work came easily to me as I was able to use my maths skills in all aspects of radar signals analysis.

My job involved determining radar signal characteristics, reporting new signal parameters through ELINT technical reports (ELTs) and updating databases. Radars were often detected undergoing modification and performing calibration tests, and on rare occasions we observed and reported malfunctioning radars. These

intercepts could provide information not normally observed and they sometimes led to a better understanding of the radar's modes of operation.

New operating modes required reporting in order to update various databases such as the ELINT Parameter Limits (EPL) listing. A book of some thickness, this listing allowed collectors around the world to quickly and correctly identify a radar emission based on its signal parameters. The military needed the most current radar performance data to help counter and defeat various weapon systems by using electronic 'jamming' techniques—a field of electronic warfare known today as electronic attack. NSA is particularly interested in electronic countermeasure development against weapon systems that pose a threat to the US military, and their analysis results are used extensively by major Defense contractors within the 'countermeasure' development community. The Electronic Warfare Integrated Reprogramming (EWIR) database contained radar information provided by NSA analysts, and this database required updating whenever weapon systems underwent modification or when new weapon systems appeared. Combat engineers used it to program the radar warning receivers (RWRs) of fighter aircraft, ground forces, and naval ships. RWRs are a key component in defence against the many lethal types of weapons available to America's adversaries.

I enjoyed the learning and challenge provided by the type of work I was doing. Outside work, I was getting to know my colleagues on a different level by involving myself in various sports such as softball, volleyball and racquetball. After work, we often went to a local sports pub, Champions, to unwind with a well-deserved beer after spinning tapes and writing reports all day. I also regularly travelled to nearby Washington DC to visit the capital's historic buildings. Maryland wasn't a bad place to live when the weather was pleasant, and when I wasn't generating reports the beaches provided a place to escape during the summer months.

Meanwhile, my career at the NSA was progressing and I was selected, along with six other colleagues, to take part in a one-week overseas conference in [redacted], a country with a controversial history and which had become closely aligned with the United States. This was my first overseas trip for the agency and I was eager to gain the experience. We went there to brief our counterparts on our analysis findings of radars and weapon systems of interest that were deployed in a neighbouring country. They also briefed us on their analysis findings and collaborated on collection tasking for those weapon systems that were of high priority for the defence of our allies. We were also taken on a tour of a specially configured aircraft

used for collecting ELINT during overflights of this area, learning how this aircraft was configured for this sensitive mission. Another highlight was visiting many of the historical tourist sites and sampling the great beers and food found in this region of Europe. The discussions were successful for both parties, but it was still a turbulent time in Europe as communism would soon begin to crumble and new democracies gain power. These fundamental changes were later reflected in where the agency focused its intelligence priorities. The world was rapidly changing and would quickly become very different to what it had been when I joined the NSA.

I received my first promotion to Grade 9 in 1987 and by then I was an experienced ELINT analyst, mentoring new arrivals into W22. I was also given the opportunity to learn how our counterparts in the Science & Technology centres used their skills to exploit captured or bought weapon systems through their involvement in specialised government research and development. I travelled to the National Air Intelligence Centre at Wright-Patterson Air Force Base in Dayton, Ohio, for an orientation on foreign airborne radars. This type of hands-on training was invaluable as it showed us the hardware that generated the radar signals we routinely analysed in the lab. Handling the actual radar antenna used by certain aircraft helped fuel my passion for the world of ELINT and kept me motivated as I assessed the performance of various threat radar systems.

In addition to reporting newly discovered radar capabilities, I wanted to attend and present my analysis findings at the various ELINT technical conferences, and management encouraged me to take part in the yearly conferences on radar signals from naval, land-based, airborne, SAMs and unidentified sources. I had already taken the mandatory course on briefing skills and was confident in my ability to represent my office at these conferences. They also provided me with an opportunity to meet several contractors and government colleagues who briefed their analysis results of signals that I also analysed. This helped broaden my perspective of the intelligence community as I was introduced to representatives of other government intelligence agencies and some of the major signal analysis contractors such as Radian and Quest. These contractors and many others made a small fortune supporting the signals intelligence business.

In late 1988 I was offered and accepted a supervisor position in the Landbased Signals Panel, W223, managing the work of three analysts and being responsible for helping with their career development. My new role exposed me primarily to early warning and air traffic control radar signals. I enjoyed my new management responsibilities but I also retained my signal analysis duties, making me a ‘working supervisor’ with both management and technical

aspects to my work. As a supervisor, I needed to comprehend a broader perspective of the agency and I was selected to go on a three-day orientation to an overseas intercept site. Each year, one or two analysts were selected to receive firsthand experience of how this particular site functioned. I looked forward to learning the finer details of signals collection from what my office regarded as the premier signals intercept facility in the world. The trip was rewarding as it greatly helped my understanding of the agency's global capabilities and aided in my understanding of what we could include in our formal tasking requests to this site.

When I returned from overseas, I prepared for a trip to California along with a few other analysts. We were to attend a course on radar stealth technology by Northrop-Grumman, developer of the B-2 Stealth Bomber. Stealth technology had been making headlines after years of research, and the United States led the way with the B-2 and F-117 Stealth attack aircraft. These aircraft could theoretically penetrate Soviet airspace virtually undetected by existing Russian radars, and this threat led the Soviets to incorporate advanced radar signals and signal processing techniques into their early-warning radars, enhancing
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Southfork Ranch, home to the Ewing family from the hit television show *Dallas*.

My radar analysis work continued and in 1990, together with a foreign integree in my office, I organised a land-based radar technical conference. One of the briefings discussed a foreign country's malfunctioning radar designed to defend against Stealth aircraft and this intercept provided data that wasn't normally observed, leading to further insights into the radar's performance. The data was recognised as new and unusual and was assigned further analysis.

I was responsible for reporting and updating parametric data for this particular signal and I arranged to visit the analysis centre at the Strategic Air Command at Offutt Air Force Base near Omaha, Nebraska in June 1990 to work with its analysts to resolve an ongoing question about this signal. □□□□

I was selected for a two-year tour—contingent on passing a psychological and medical evaluation. My wife wasn't prepared to come with me, preferring to remain in a familiar place with her parents. She was, however, required to see the agency psychologist who would determine whether our marriage would be adversely affected if I took an 'unaccompanied' tour for two years.

My medical exam consisted of checking my heart, standard health tests such as blood pressure and blood tests, and a test for colour blindness. (I later found out that the computer monitors at Pine Gap colour-coded much of the systems status information, and distinguishing this meant that I was required to see all visible colours.)

My rare unaccompanied status meant that the psychologist was concerned with how well my wife and I would handle our separation. As I was selected to work with foreign nationals in a foreign country, my temperament was also evaluated to determine whether I would be an appropriate representative of the United States Government. Although I wouldn't be a diplomat, I would be interfacing with Australians on a daily basis in their country and the NSA wanted representatives overseas who could do the work and would be able to build and strengthen the partnership between the two countries.

My wife and I attended the psychological evaluation together so we could answer questions about our impending two-year separation. We had discussed the benefits and drawbacks of my going overseas and she agreed to my being away as long as it wasn't for more than two years. As a way of trying to reinvigorate our marriage we also planned a second honeymoon in Hawaii halfway through my first year in Alice Springs. I was looking forward to a break and thought perhaps distance and a second honeymoon might make us appreciate what we did have and bring us closer together. With our psychological evaluations approved, I scheduled an appointment with the appropriate office for an orientation on my new assignment, the living conditions and the benefits of serving the agency overseas.

I have to admit that my knowledge of Australia was quite limited. My first thought of that faraway country was of Paul Hogan as Crocodile Dundee brandishing an enormous knife and whip, sending the cowering Americans fleeing in fear of the man from 'Down Under'. Evonne Goolagong was another Aussie I knew, as I enjoyed the occasional game of tennis. I guess I thought of Aussies as strong, outdoorsy, sporty people with a good sense of humour. With a passion for fitness and team sports, I thought I just might fit in when I arrived in my new home.

'Dry and hot' is how my orientation officer first described my new assignment in Alice Springs. 'It will be like living in Phoenix, Arizona,'

she said. I wasn't told exactly what I would be doing; instead, the conversation revolved around the weather. I was told about the dry heat, lack of rainfall, and the small-town living conditions with limited choices. I was also told of the overseas benefits I would receive, the friendly people, and how Alice Springs was a very sociable place to live, with many organised sports. I believed the work would keep me busy, stimulated and satisfied and was quite curious as to what it would be like to live as a resident in such a remote location.

And so I secured the job at a location that the NSA classified as a 'hardship tour'. Alice Springs would later be described by author James Bamford in a way that made it sound as if I were being sent into exile: 'Chosen for Rhyolite's ground station was a godforsaken patch of earth at the centre of Australia. Surrounded by a fearsome Mars-scape of red, sunburned desert, corrugated scrubland, waterless rivers, and parched saltbrush, Alice Springs had everything NSA wanted: isolation.'[4]

I wasn't worried about the living conditions as I knew I would cope well in a small town; anyway, it was my financial problems and the fascinating work that drew me to this lonely outback town of just 18,000 people. I did wonder what other incentives brought families to a place with such a foreboding description. Many coveted NSA overseas assignments could be found in exciting locations such as Hawaii, the United Kingdom and Japan, but despite the somewhat depressing description of Alice Springs as a hardship tour, it was the nature of the job that was a top priority for me, and this made Alice Springs the most desirable place I could be at that time.

Because of the harsh environment, the buildings at Pine Gap are all painted white to insulate them against the oppressive summer heat in Central Australia. They're grouped alongside several radomes (the name is an elision of 'radar dome')—giant golf ball–like structures that are transparent to electromagnetic energy and prevent sun, rain, ice, wind, lightning, sand and dust from damaging the delicate antennas that point towards space.

Pine Gap and Alice Springs are small spots on a vast open land of red dirt and mountain ranges. The hardy eucalypts (red gums and white gums) that populate the desert survive remarkably well in a land that averages approximately two weeks of rainfall every year. So what else was it about Alice Springs that made the NSA describe this town as a 'hardship tour'? I had pondered what the government meant by 'hardship' and wondered how hard it could actually be. To me, the term invoked images of living in a tent on a mountainside with no running water, my backyard serving as a toilet, occasional gunfire waking me from a sound sleep, and travelling in snow over rugged terrain. But I knew Australia wasn't a Third World country. This

wealthy modern nation hardly conjured up any thoughts of suffering. As far as I was concerned, moving to a small town with only three traffic lights and a bus service to and from work was much more enticing than shovelling snow off my car every winter's morning just to get it out of the driveway, and I certainly wasn't going to miss the daily battle with the million or so commuters stuck in traffic jams in Washington DC and Maryland. Hardship was in the eye of the beholder.

In reality, the NSA considered Alice Springs a hardship posting because of its remoteness, comparatively harsh summer weather, and lack of lifestyle choices. Having a limited number of restaurants wasn't a problem as I would forego a Big Mac for a good Aussie steak in a heartbeat. But to make up for being stuck in the middle of nowhere the NSA enticed us with some excellent incentives that included a higher salary, free housing and paid utilities, a paid business-class R&R return trip to the United States every year, tax-free alcohol (and tobacco products for smokers), transportation to and from work, a United States Post Office, a large gym, and an extra fifteen days of annual leave (known as home leave) every year.

My mind was made up: I completed the paperwork with the HR and payroll offices and was scheduled to depart for Alice Springs in late October 1990. My office held a small going-away party for me and they presented me with a certificate for 'Dedicated Service to the Office of ELINT for Nation's Security' signed by my colleagues. In September, my wife and I were making plans to celebrate our third wedding anniversary when the agency asked me to leave earlier than planned. Iraq had invaded and occupied Kuwait less than two months earlier, on 2 August. On 7 August, President George HW Bush announced that the United States would put in place a defensive mission, Operation Desert Shield,[5] to prevent Iraq from invading neighbouring Saudi Arabia. Due to these political developments the NSA asked me if I could leave on 2 October and start my new job on 5 October, which meant leaving before my wedding anniversary. My wife and I agreed to celebrate early and I prepared to depart two weeks after our celebration.

As we drove to the airport and the reality of living apart for two years sunk in, my wife began to have second thoughts. 'Don't go,' she pleaded. 'The agency will understand if you decide not to go.' But I wanted to go. We couldn't survive financially if I stayed, and I knew that neither of us had been completely happy together. As we made our way to the departure gate I kept the bigger picture in mind. I told her that I loved her and would see her soon in Hawaii for our second honeymoon. We hugged and kissed goodbye in an emotional farewell.

I boarded the aircraft and settled into business class, wondering if

my marriage could in fact survive the two-year separation. As the plane pushed back from the gate and rolled down the runway, I could see my wife looking out from the terminal window. I felt very sad about leaving but tried to focus on my new position, believing the two years would pass quickly. While I worried about my marriage and leaving my wife, the patriotic thoughts I'd had as a young boy returned to me. With the United States deploying forces to the Middle East, I was eager to get to my new workplace to help my country and our Australian allies prepare for a possible war. I began to look forward to my new destination: the Australian outback—the land of kangaroos and killer snakes.

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3: THE MISSION

A weapons reconnaissance satellite in orbit

While Pine Gap had been quietly collecting and reporting intelligence for twenty years before my arrival, the mission there remained a delicate subject for both the Australian and United States

governments, with neither willing to reveal details of the facility's capabilities or of the government agencies receiving and analysing intelligence from it.

The site's official history began on 9 December 1966 when Australia and the United States signed an agreement creating a new government facility called the Joint Defence Space Research Facility (JDSRF).[1] Two days later, the Australian Government issued the following statement:

> The Governments of Australia and the United States have agreed to establish a joint United States / Australian defence-space research facility in the vicinity of Alice Springs. This facility will be operated by the Australian Department of Defence and the Advanced Research Projects Agency of the United States Department of Defence.
>
> A variety of research projects will be carried out and the results obtained will be available to both countries.
>
> The facility will be constructed on a site some 12 miles southwest of Alice Springs. About 10 square miles of land will be required as a buffer zone to reduce electrical interference, although the facility itself will be built on an area of approximately 50 acres.
>
> The facility will include its own power plant, air-conditioned laboratories to house electronic equipment, and two radomes, each of which will enclose a large antenna. No launching or firing operations will be conducted at the site and it may be possible to continue grazing stock in the buffer zone.[2]

Australia and the United States shared common security interests in Asia and the Pacific, and the ANZUS Pact of 1951[3] had already galvanised the two nations' post–World War II security partnership.

Australia's commitment to support the JDSRF was therefore a natural extension of the protective agreements that existed both in writing and in spirit. (In the 1980s, the JDSRF was renamed the Joint Defence Facility Pine Gap. 'Pine Gap' refers to a pass in the MacDonnell Ranges used to access the land on which the facility is located.)

On 25 May 1961, President Kennedy announced his ambitious program to land a man on the moon and return him safely to Earth. In the ensuing five years, technology advanced rapidly, primarily driven by the needs of the military to combat the ongoing Cold War. When the JDSRF treaty was signed, the United States' spy satellite program was still in its early stages, but spy satellites then quickly grew in size and eavesdropping capability. As successive spy satellites went up,

greater amounts of increasingly complex data were sent down—relayed to the collection facilities where the data was processed and reported. When the United States needed a new facility, Australia was the perfect choice. Politically, the Australian Government was also eager to strengthen its alliance with the world's most powerful country. Not surprisingly, Alice Springs' 6400 residents extended a warm welcome to the Americans constructing the mysterious new government buildings as this large government project would be an economic boon to their relatively obscure outback town, providing jobs and many American dollars to local businesses over a long period of time.

The United States Government's prime contractor for site construction was Collins Radio Corporation, which began work on the site in January 1967. In 2002 I became friends with Terry Lillis, the first Australian contractor hired during the construction phase, and he told me about the early days.

Terry was one of three brothers who owned the civil engineering firm Norter Excavations. Norter's job was to excavate the land for Pine Gap, and Terry, a qualified boilermaker-welder, was the one who stood in a paddock of grass and swung the sledgehammer that embedded the marker that served as the datum point around which all subsequent construction would take place. The small ceremony was attended by at least one Australian government official, along with a 'big Texan' and other contractor personnel.

Work was now ready to begin, but the project immediately struck a 'minor' glitch: although Australia didn't switch to the metric system until the mid-1970s, several contractors in Alice Springs had already begun using it. As the United States plans were all in imperial measures, this forced the contractors to carefully convert the units prior to construction to ensure that the infrastructure was built to scale.

Terry recalled one particular individual, whom he described as a relatively short Native American, who led the construction and also had a taste for whiskey. One day he asked Terry if he'd ever heard of Old Grand-Dad bourbon. When Terry said he hadn't, he was quickly shown one of the 'rounded-triangle' bottles. 'I really like this stuff,' the American said to Terry, implying that a carton per week would put him in a beneficent frame of mind. Lillis winced at the bribe that was clearly suggested, but proceeded to purchase one carton of the liquid gold a week at the staggering 1967 price of about $25/bottle, helping to keep him and his men gainfully employed as the jobs kept rolling in: digging, compacting, dust compression, and so on.

At one point, the Americans needed a septic system installed and Terry realised that a rather large tank was needed for the many

Americans who were scheduled to arrive. He knew of an abandoned old tank that could be unrivetted and transported to the site. Terry said he could alter the tank to suit the Americans' needs and eventually installed the septic tank for the Yanks. The Australians thought this was pretty funny as—in typical Aussie fashion—they sometimes abbreviated the rhyming slang for 'septic tank Yanks' to 'seppos'.

The amount of money that flowed from the Americans to the Australians was extraordinary: Pine Gap had become the second-stream economy in Alice Springs. The Americans lived large, even transporting their cars to Alice Springs by military transport plane. They often sold them to the locals when they left, almost always at a profit, with Alice Springs becoming inundated with left-hand-drive vehicles.

As construction progressed, a rubbish dump was partially excavated and named the Bone Yard. It became home to outdated equipment, air coolers, a huge amount of furniture (much of it good quality), and even cars and jeeps. Terry claimed that much of the 'rubbish' was buried because it was initially purchased tax-free and couldn't legally be resold—a classic example of unnecessary and excessive government waste.

Alice Springs was now host to many Americans who loved to gamble, so Terry opened an 'underground' casino complete with a roulette wheel and a blackjack table that boasted a Canadian croupier. When not moonlighting as a blackjack dealer, the Canadian was a geologist assisting in the search for oil and gas near the Mereenie Basin.

The 'casino', which operated every second weekend, was well hidden from the authorities—in a back shed at a local sports bar where punters could stay until 3 am or their money ran out. In exchange for use of the shed, Terry gave the owner between $600 and $1000 each time the 'casino' opened for business. Later, when the Lasseters casino opened in Alice Springs, Terry's backyard gambling business suffered and he was forced to close. Not to be outdone by Lasseters, and with the advent of the internet twenty-five years later, the entrepreneurial Lillis went on to establish Australia's first successful internet horserace betting, with a website, centrebet.com, that he eventually sold for a huge profit in 1998. In 2000 he established another online betting site, centreracing.com.

A popular hangout for those working at the site, apparently, was Zedina's restaurant and pub (now the Alice Pacific Resort). Many Americans frequented Zedina's, but they were told to keep a low profile and stay out of trouble in Alice Springs so as not to draw unnecessary attention to the Base. With the large amount of American

dollars available for spending, generous quantities of alcohol were consumed, inevitably leading to a few altercations between the Americans and Australians.

One source of conflict was the fact that local girls—always in short supply in Alice Springs—were attracted to the big-spending Americans, the glamour and intrigue surrounding the top-secret construction project, and rumours of CIA officers working in town. It was common knowledge that many women were 'smuggled' into the secure construction site after hours, where temporary housing for the Americans was located. There was also anger among the male Aboriginal population when American men began dating Aboriginal women. This sometimes led to Americans being targeted by the local Aboriginal men and heightened racial tensions in a town where Aboriginal rights were still evolving.

Eventually the initial construction work at Pine Gap was completed. This brought Terry's work to an abrupt stop, although he did occasionally receive small, intermittent jobs afterwards. Other contractors began to be engaged, a shift that Terry attributed to security concerns; if any one person knew the complete civil infrastructure at Pine Gap this could compromise security. In spite of this, Terry remains a vehement supporter of Pine Gap to this day.

With major construction concluded, a walk-through of the facility took place on 29 April 1968. The next day the JDSRF's maintenance and operations personnel officially assumed responsibility for the new installation,[4] and shortly afterwards the heavy technical equipment arrived that was necessary to perform the work at the new facility. On 19 June 1970, after three years of extensive excavation and construction, Rhyolite 1 was launched.[5]

Contractors have always played a key role at Pine Gap, and over the past forty years many have helped with the mission in Operations and overall maintenance. Raytheon, the primary contractor inside the secure building, is tasked with manning positions within Operations, and its operators are referred to as 'rack jocks' because each operator sits in front of a tall rack of equipment, monitoring data and alerting Operations to anything new that might indicate an impending event. Raytheon also manages the computer network, equipment maintenance and the Engineering division. In times past, Boeing Australia administered the contract for grounds maintenance, housing and the motor pool, but Raytheon successfully obtained this contract in 2004–05, making it by far the largest contractor currently at Pine Gap.

Pine Gap is also the largest employer in Alice Springs, with well over a thousand local residents working at the Base or contracted to help maintain the housing, kitchen and grounds, including the

maintenance of more than 200 houses and flats required by the families who work at Pine Gap and ongoing maintenance of the ground facilities at the Base and in town. Also among the personnel are security officers, bus drivers who transport the employees to and from work, mechanics who maintain the transport vehicles, and kitchen and laundry/cleaning staff who prepare meals and maintain the guest quarters. While Alice Springs certainly attracts tourist dollars, if Pine Gap was to close, the local housing market would collapse and many local businesses would close along with the Base. As the largest employer in Alice Springs, Pine Gap has been, and remains, absolutely vital to the economic health of this small outback town.

So Pine Gap maintained a quiet presence in Alice Springs, growing with the pace of increasingly complex technology. The progression of satellites began with Rhyolite but advanced in complexity and capability under various program names, including Aquacade, Magnum, Orion and Advanced Orion.[6] As Desmond Ball has said of the latter, 'The latest geostationary SIGINT satellites, Advanced Orion, weigh some 4,650 kilograms, or about twice as much as the Magnum/Orion satellites, and are able to intercept an even broader range of signals.'[7]

Professor Ball also pointed out that Pine Gap operates under the direction of the National Reconnaissance Office (NRO) and states that the NRO is the intelligence community's 'super-secret intelligence satellite coordinating agency'.[8] Established in 1961,[9] the NRO directs the building of spy satellites and manages their tasking, operation and control. He also says that 'the Pine Gap facility (codenamed Merino) was originally established as the ground station for the Rhyolite satellites'[10] and that 'there are NSA personnel at the US Embassy in Canberra, at the Pine Gap and Nurrungar Rhyolite and DSP…'[11] He expands on this in another publication when he states that Pine Gap 'comprised… personnel from [redacted] [the Intelligence Community and Service] Cryptological Agencies'.[12]

California-based TRW (later acquired by Northrop-Grumman) designed and built the Rhyolite satellites. These early satellites were capable of intercepting 'telemetry, radars, and communications' with an intercept capability that 'extends across the VHF, UHF, and microwave frequency bands'.[13] (Much of the early Rhyolite satellite program was compromised to the benefit of the Soviet Union by a TRW employee, Christopher Boyce, whose story was told in the movie *The Falcon and the Snowman*.[14])

An additional, well-documented capability of satellites is the

ability to locate the origin—the location on Earth—of an electronic signal.[15] Search-and-rescue beacons[16] are perhaps the best-known signal type; for over thirty years there have been stranded mariners whose ships' search-and-rescue beacons have been located by satellites, resulting in them living to tell the tale. Military pilots are required to carry beacons for the same reason and thanks to the geolocation capability of satellites, a great number of 'downed' pilots have also survived—Captain Scott O'Grady is one such pilot whose story will be told in a later chapter.

It wasn't until 1988 that then Australian Prime Minister Bob Hawke publicly acknowledged that Pine Gap performed government arms-control functions, admitting that the function of the satellites was 'to collect intelligence data which supports the national security of both Australia and the US' and adding that 'Intelligence collected at Pine Gap contributes importantly to the verification of arms control and disarmament agreements'. From this statement and the secrecy surrounding Pine Gap, it was acknowledged that the satellites performed government security and intelligence collection functions.

Nevertheless, the Australian Government was still careful not to reveal too much information; there was no disclosure, for example, of which agencies used this intelligence or exactly how many satellites were controlled by Pine Gap. Important technical data was also withheld, leaving observers to speculate on the exact nature of the satellites' operations.

Since the 1970s, the secrecy surrounding Pine Gap has resulted in protests by Australians demanding the public revelation of Pine Gap's function and the true nature of the intelligence collected there. The intelligence obtained at Pine Gap is unrestrictedly shared with Australian government intelligence directorates exactly as it is shared in the United States—on a 'need-to-know' basis. The concept of 'need-to-know' relates only to those who possess the security clearance required to perform the work there, or to make decisions derived from some of the intelligence collected at Pine Gap. Those who don't possess this clearance obviously don't need to know any of the intelligence collected at Pine Gap in order to do their job.[17]

In 1975, thirteen years before the official disclosure by Prime Minister Hawke, reports began to emerge that Labor Prime Minister Gough Whitlam wanted to close Pine Gap. It was claimed that the Prime Minister believed his government had been misled over key operational and management issues after discovering that 'Pine Gap was a United States wholly administered operation commanded by □□□□□□□□□□.[18] Other reports suggested that Whitlam believed Australian intelligence services worked with

□□□□□□□□□□□□□□□□ to bring down the government of Salvador Allende, the president of Chile, on 11 September 1973, and he had threatened to close the facility at Pine Gap as a result.[19] According to Australian author Richard Hall in his book *The Secret State*, the United States Government was also reportedly concerned when Whitlam refused to allow his staff to undergo customary security checks, reportedly prompting □□□□□□□□□□□□□□□□ to threaten to withhold intelligence information to Australia.[20] Whitlam eventually agreed to reinstate the security checks, but his rift with the Australian intelligence community continued, culminating in the removal of the heads of the Australian Security Intelligence Organisation (ASIO) and the Australian Secret Intelligence Service (ASIS) in 1975.

Whitlam was removed from office on 11 November 1975 by Sir John Kerr, the Governor-General of Australia, using an archaic legal provision that had never been used before. The accepted story of Whitlam's demise as Prime Minister centres on an economic crisis in which the Senate refused to pass the Labor government's money bill, the Supply Bill, but since Whitlam was allegedly threatening to close Pine Gap, there was also speculation that the United States urged the United Kingdom to remove him.

After the dismissal Kerr wrote, 'My decision of November 11, 1975, to dismiss Whitlam was exclusively my own, made upon my sole and full responsibility as governor-general. No one else produced it. The CIA had no part in it.'[21]

It is unlikely that the Prime Minister of Australia, as the head of government, would claim not to know or not to have an informed opinion on which American agencies were placing officers within his country at Pine Gap. The deputy chief, the Australian leader at Pine Gap who acts as chief when that individual is away from the facility, is required to be an Australian, and this person should certainly have known (or had a good idea) which US agency employed his counterpart. If the Prime Minister was ignorant of this basic information, why would anyone want to keep it from him and how would they have succeeded in keeping such details from the head of government? Surely he, more than anyone in Australia, should be entitled to the clearance authorising him access to some details and information obtained at Pine Gap and the background of the Americans working there. Did the Australian Government actually sign an agreement allowing Pine Gap to be constructed without the proviso for this information?

The agreement establishing Pine Gap on 9 December 1966 listed the cooperating United States organisation as the Defense Advanced Research Projects Agency (ARPA).[22] As expected, there was no mention of the CIA or NSA in this document, but if these agencies had

personnel working there, was there a verbal agreement allowing this with Australia? If so, would this verbal information have been passed on to the Prime Minister and his successors? Only those present in the early days can answer this question.

On 19 October 1977, shortly after the Whitlam dismissal, the agreement was amended to state that the United States Department of Defense was the cooperating United States organisation at Pine Gap.[23] As I've said, 'the Department of Defense' can be used as a nonspecific reference to the NSA.

Rumours of CIA involvement at Pine Gap have been around since the construction phase, with the average Alice Springs resident fully versed in these stories. The apparent 'intelligence gap' between the Australian leadership and the residents of Alice Springs seems inconceivable, and the explanation that Gough Whitlam didn't know (or suspect) which United States government agency 'ran' Pine Gap makes no sense.[24]

An interesting side story as to who actually ran Pine Gap can be found in the book *Legendary Territorians* by Reg Harris.[25] Reg, a good friend of mine in Alice Springs, owned a vacant lot next to his home on Cavenagh Crescent, which he eventually sold to the United States Government. On this lot the Americans constructed a rather large property that became home to the second chief of Pine Gap, Harry, and remained the chief's residence until a new home was constructed around 2001. When Harry moved into his new home, Reg and Harry became close friends, remaining so well after Harry retired and moved home to Virginia. In his book, Reg explains:

> Harry eventually retired from the United States Government and he and Betty live in a most attractive home in the tiny town of Clifton, some 20 miles out of Washington. My wife and I visited them in 1987. We were taken downstairs to the bar. The walls were covered with certificates, photos, and memorabilia, including photos of Harry with President Reagan □□□□□□□□□□□□□□□; which had handwritten messages praising Harry. There was also a silver-plated shovel and hard hat used by Harry to turn the sod for the planned 400 million dollar extensions to the □□□□□□□□□□□□ head office in Washington DC. Finally, on the wall were eighteen framed citations for meritorious service to □□□□□□□□□□□□.[26]

Reg told me many stories about Harry, including how, during the 1987 visit, he asked Harry directly who he had worked for while he was chief at Pine Gap. Harry told him, asking his old friend to keep this information 'private'.

In his book, Reg also explains how Harry served as a model citizen during his tenure in Alice Springs and how he demanded the same from his American staff. His first rule to the new arrivals was 'No ugly Americans' or they would be sent home—the next day! He was keen to maintain support from the community for Pine Gap and by every account he succeeded beyond all expectations.

As a token of their friendship, Harry gave Reg a pair of JDSRF cufflinks before his tour ended in Alice Springs and before the name of the facility was changed. Over the years, I spent many evenings with my friends Reg and his wife Marge, who frequently referred to me as their 'favourite American'. Before Reg died in 2007, he gave me the now collectible cufflinks presented to him by Harry. They are among my most valued possessions that I've proudly worn every year to the annual Pine Gap Ball.

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4: ON THE OTHER SIDE OF THE WORLD

Pine Gap's remote location

I had visited Australia and Alice Springs before and could still vividly remember my first impressions. The three-hour flight from Sydney had taken me over an immense dry land of mostly red desert, and as my plane approached the Alice Springs airport I could see the radomes of Pine Gap nestled quietly in the MacDonnell Ranges to the left of the aeroplane. It was the height of summer, and as I stepped off the plane I was greeted by the brilliant sunlight, a searing heat, a cloudless blue sky, and what I can only describe as a biblical 'plague' of flies. One of my fellow passengers was wearing a white shirt, but

his back was black with flies soon after stepping off the plane. I glanced over my shoulder to discover that the flies had taken an immediate liking to me as well. It didn't take me long to become expert in the legendary 'Aussie salute'—habitually brushing flies away with a wave of the hand. 'Alice Springs needs to work on its welcoming committee,' I thought to myself. I eventually discovered that Alice Springs also has seasons when it is besieged by grasshoppers and cicadas, in addition to the flies.

When I actually arrived in Alice Springs to begin my two-year tour, I stepped off the plane into a sunny spring day. All new arrivals had been assigned an American sponsor before leaving for their new home, and this person had to be someone who had been living in Alice Springs for at least six months and knew both the town and the basic needs of a new arrival. My sponsor, Steve, had worked at the Base for more than a year and was to be my immediate supervisor. He had already organised my new mailing address at the local American Post Office, set up my phone and stocked my refrigerator and freezer with basic foods by the time he picked me up and drove me to my new residence. He even rang me before I left my home in Maryland and suggested suitable clothing for the local weather conditions.

As Steve and I drove into town, I was again struck by the ancient landscape of the Australian desert. My new home was very different to anywhere I had lived before. The large rock formations, the vibrant reds and greens of the desert stretching in all directions, and the red and white river gums standing starkly in the dry Todd River bed all made me eager to explore the striking sights around me. As we drove through a pass in the ranges known as Heavitree Gap, I craned my neck to see the rocks rising several hundred metres above us.

Just near my flat Steve pointed out a tall eucalypt. I later crushed the leaves between my fingers, smelling the stimulating scent of eucalyptus on my skin. It was hard to imagine a place more remote and of greater contrast to the life I had left behind near Washington DC.

My new flat was small and stocked with a survival kit of essential items such as linen, pillows and bathroom supplies while I waited for my household goods to arrive from Maryland. The housing team at Pine Gap had twenty years experience helping new arrivals adjust to life in their new home and I was grateful that they'd made my transition so easy. Funnily enough, one of the things that took some adjusting to was television in Alice Springs—it was certainly behind the times by US standards: Aussies in those days received only four channels, unlike the relatively large number of cable channels back home. It would take another six to seven years before satellite television finally arrived.

On my first evening in Alice Springs Steve kindly invited me to his home for dinner with his family, where I met his wife and children. I thoroughly enjoyed the home-cooked meal and talking about the various activities on offer in Alice Springs, but left early as I was tired from the flights.

At 7 am the next morning he picked me up for my first day as a permanent employee at Pine Gap. As we began the twenty-five-minute drive out to the Base, leaving the small township of Alice Springs behind, I saw several colourful hot-air balloons floating serenely above the red desert. As far as the eye could see, the tourists on the balloons were the only sign of human presence. Eventually we turned off the Stuart Highway and onto Hatt Road, which leads to only one destination.

The Joint Defence Facility Pine Gap sits on formerly private land acquired by the Australian Government during the short period when Harold Holt was prime minister. Once upon a time the land was occupied by the indigenous Arrernte people, and I couldn't help but wonder what their ancestors would make of such a modern hi-tech facility operating on their ancient land, or what their descendants thought.

Ahead of us at the entrance, I saw large security gates that made my new workplace look like we were entering a prison. Steve parked and escorted me to the Security office where I had my photo taken for the badge that would allow me to enter the secure area of Operations. I was excited to be at my new workplace and had known that if a diplomatic solution to Iraq's invasion of Kuwait wasn't formalised, military action by the United States and a coalition of allies against Iraqi forces was certain. Tensions around the world had heightened as Iraq had taken control of the oil production facilities in Kuwait, and the possible disruption to global oil availability had many governments concerned. The United States wouldn't allow Saddam Hussein's influence and control in the region to expand. The United Nations condemned his unilateral annexation of Kuwait into the nineteenth province of Iraq,[1] but Saddam had no honourable way to leave Kuwait. As this stalemate continued, the United States and the coalition were both overtly and quietly preparing for military confrontation by mobilising forces into the region and gathering intelligence through clandestine means. As we parked outside and prepared to enter Operations, I was concerned that a war against such a large military would likely result in casualties for US and coalition soldiers. But I was also eager to find out exactly what my role would be as the United States and its allies prepared for what seemed to be an inevitable conflict in Iraq and Kuwait.

On the inside, the facility with its large computer network couldn't have contrasted more strongly with the harsh land it sat upon. When I entered the secure building, I noticed two very large flags—Australian and US—mounted within a large display case with a commemorative plaque that told how the flags had been transported in a space shuttle carrying one of Pine Gap's satellites into orbit.[2] As I walked onto the Operations floor, I noticed a hub of activity within my new workplace; technological advances had seen Operations grow to accommodate the numerous analysts needed to accomplish the daily tasks performed at the Base.

Looking around Operations, I was surprised to see a persistent cloud of cigarette smoke. The United States Government had banned cigarette smoking in government buildings before I left for Australia, but the joint Australian facility had yet to adopt the No Smoking policy. As a non-smoker, I was relieved when Pine Gap soon followed suit, although there was one defiant American mission director, Jim, who continued to smoke after the regulation took effect, brazenly lighting up at least every hour. As the highest authority on the Operations crew, he believed—and was right—that he wouldn't get into too much trouble, and besides, he had only a short time remaining on his tour.

The entire Operations floor was dimly lit as the analysts needed low light to help them see details on their computer monitors. I saw signs above the various work areas indicating the type of activities being performed by these highly specialised operators.

Every analyst wore a headset that allowed them to communicate with the other analysts when collaboration was required. The headsets also blocked out extraneous noise, allowing them to hear, interpret and filter important signals from routine ones. Some analysts appeared to be highly focused: busily adjusting dials, interfacing with their monitors or writing reports. Others sat back in their reclining chairs chatting with each other while they watched their monitors, waiting for something of interest to happen. Operations was typically kept quite cool to help protect the ubiquitous racks of electrical equipment from overheating. Nevertheless, almost everyone dressed casually; many in shorts and t-shirts. The casual dress in Operations was one way to distinguish most shift workers from the day staff.

For an operator/analyst, a day on the Operations floor was a mix of the routine and the sometimes surprising and exciting events that made us eager to return for another day. Depending on world events at the time, Pine Gap focused on various 'hot spots' of military interest. My first duty when arriving for an eight-hour shift was to review the responsibilities of my section, where I worked alongside an Australian counterpart. Two operators on position allowed one of us

to take breaks and attend meetings and classes if necessary while the other performed the work. Both Americans and Australians manned similar positions across Operations, providing an opportunity to exchange respective knowledge and build on the solid partnership that existed between the two allies.

On that first day, I noticed that the vast majority of analysts were male.[3] This didn't surprise me because in 1990 the type of intelligence work performed at Pine Gap was done by many former military men trained in signals analysis, but in later years many more women would be selected for work in Operations, until eventually there were almost as many women as men. As I walked to my work area I thought to myself, 'How many Australians work here?' □□□□

walked away. He later took credit for the entire report in an effort to help his promotion prospects, but the team at Pine Gap quickly decided to counter the tactic by then including the author's name at the conclusion of every report. (Though not promoted while at Pine Gap, in later years this colleague was rapidly elevated to Grade 15, the highest level attainable before advancing to the Defense Intelligence Senior Level or the Defense Intelligence Senior Executive Service.) When he didn't receive his promotion as he'd expected, he demanded that the Chief of Operations (COP), an American, retroactively promote him or he'd curtail his tour and go home. The COP pointed him towards the door and suggested he seek psychological counselling and training on 'how to work well with others'. He was not missed.

A basic flaw in NSA's promotion process was—and still is—that not all supervisors require proof of the contributions that subsequently appear on a promotion recommendation. An individual may often simply *state* that he or she has accomplished a particular achievement, regardless of whether the work was performed as described. The COP at Pine Gap recognised my colleague for what he was, but other senior officials at Ft Meade fell for his tricks, which allowed him to achieve a position where he eventually led others.

Floyd Paseman, one of the CIA's 'barons' (overseas chiefs), has an insightful axiom about managers in his book *A Spy's Journey*: 'Axiom 8: Not everyone can or should become a manager. Our system has let us down. At a certain stage, officers are promoted into the ranks of management whether or not they have demonstrated that they are management material.'[4] Unfortunately, many individuals claim credit for the results of others in order to further their own advancement, and when these individuals are promoted into positions of authority through the merits of others, the lack of the basic leadership skill of acknowledging credit where it is due can cause much harm, with the interests of the individual being put ahead of those of the organisation. I am pleased to say this was a relatively rare occurrence within Operations.

As I settled into my new life in Alice Springs, I enjoyed the camaraderie between the Aussies and the American government workers, civilian contractors and military who all worked with me on the Operations floor. We worked a rotating eight-hour shift schedule of days (7.30 am to 3.30 pm), swings (3.30 pm to 11.30 pm) and mids (11.30 pm to 7.30 am) and spent time getting to know each other at our various work positions. Contrary to popular belief, in 1990 there were no work-related secrets between the Australians and Americans as all information in Operations was shared, and this contributed to a positive and trusting atmosphere.

It has been said that Australians weren't allowed into the signals analysis section before 1980.[5] In those days, the apparent lack of collaboration and cooperation on intelligence issues would certainly have generated mistrust and inequality among some Australians, and this was a likely factor in the minds of many of those who, in the 1970s and 1980s, opposed the presence of Pine Gap and protested against it. I found the Australian contribution to the mission at Pine Gap to be exemplary, both in technical competency and in problem solving, with the accessibility of operational information to both countries helping to strengthen our allegiance as long-time allies.

One year before my arrival, a very good friend and professional mentor of mine, Joe, had arrived in Alice Springs with his wife Pat. Joe and Pat made me feel at home in Alice Springs, graciously inviting me to dinner almost every night for a home-cooked meal. I quickly took advantage of this as Pat was a very good cook, Joe knew his way around the barbecue and my flat was only a four-minute bike ride away.

When I first visited their home, I saw several pillowcases hanging from the carport with what I thought were potatoes inside. Then I saw one of the suspended 'potatoes' kick. It turned out Joe and Pat had many kangaroos hopping about their yard and had developed some notoriety around town for volunteering to care for the baby kangaroos (joeys) whose mothers had been killed after being hit by a vehicle or shot by hunters. Joe became known as the Kangaroo Man and his home eventually became known as the 'roo zoo'.

It made for a memorable experience when they allowed me to hold some of the joeys and feed them formula from a bottle. It was just like feeding a baby with long legs and very big ears. In his backyard, Joe also had a couple of aviaries with many exotic parrots and budgerigars, and the number of birds and aviaries grew through the years to eventually take up most of the yard. The birds somehow managed to coexist harmoniously, albeit noisily, with the kangaroos—as well as with cats, dogs, chickens and even a turkey!

Joe and Pat were the closest thing to family that I had in Alice Springs, and I later also became friends with their son Wes, who stayed in Alice Springs for months at a time while on vacation from the University of Maryland and who later entered the United States Air Force as an officer.

I was fortunate to also make friends with some of the Alice Springs locals who worked at Pine Gap, including cooks, bus drivers, maintenance workers and security officers. Their contribution to the smooth running of the facility was appreciated, and we would often socialise together after a long day at the Base. It was common to have a midnight swim at the outdoor swimming pool, drinks at the Bull Bar

or a game of pool or tennis with anyone, regardless of their rank or position, and this sense of equality and camaraderie was an appealing part of the lifestyle I experienced at Pine Gap. While I found that the Aussies were always professional, friendly and helpful to a new bloke like me at work, they were definitely more laid-back when not working.

Soon after arriving in Alice Springs, I heard an interesting story about why the Base swimming pool was constructed. It seems that an early chief wanted a swimming pool built on Base, but his request was refused on the basis of insufficient justification. But this clever chief wouldn't let himself be overruled, so he rewrote his justification pointing out that the weather in Alice Springs is often so hot and dry that the possibility of fire was a very real threat to the facility. Pine Gap needed an 'emergency water reservoir' in case one of these fires ever threatened the lives of the workers at the Base. This justification was accepted by the United States Government and Pine Gap got its chlorinated 'emergency water reservoir', complete with a diving board, marked swimming lanes and ladders in the deep end. When I asked, I was told there'd never been a fire at the Base, and that the only real environmental heat hazard at Pine Gap was sunburn.

Meanwhile, my association with such a diverse group of coworkers helped me enormously as I struggled to learn my new foreign language—Aussie slang. The local lingo took a while to make sense to me as new words and phrases such as 'No worries' were thrown around. I had to learn that being called a 'bastard' could be a term of endearment, while calling someone a 'yobbo' was not at all flattering. Not dressing to standard meant you could be referred to as looking like a 'dog's breakfast', while 'cracking onto' someone could go well, if a mate 'made it' with a local lady, or badly if he was told to 'rack off'. It was worth knowing where the 'dunny' was, particularly if an American had just finished a 'slab', and was not so 'off his face' as to be unable to find it. Was this easy? Not at first, fair dinkum. Learning this new language took a while, but I eventually got the hang of it. It became quite natural to speak like the locals, and I even practised my new way of communicating when I called the United States to speak with friends. I found that I often had to translate as if I were actually speaking in a foreign language and not just adding a few colloquialisms.

I found the Aussie humour genuinely to my liking and often laughed to myself when I heard the new Yanks exposed to parts of the language that they either didn't understand or didn't find particularly amusing. Around Australians, I found myself becoming happier and more Aussie-like as my time in Alice Springs stretched on.

For security reasons, Pine Gap is isolated and confined, and some

of my friends back home believed I worked underground as other US military facilities were reported to descend several storeys to protect against attack. This wasn't the case, but I did work literally in the middle of nowhere in a secured fortress. Although there were no windows in Operations, I didn't find this claustrophobic at all, given the vast open space of the Australian desert surrounding me. When I arrived, I was only thirty-one, with no family members, so I jumped at every opportunity to experience the fresh air and beauty that I found in Central Australia. My first trip outside Alice Springs was in January 1991 to two very significant Aboriginal sacred sites: Ayers Rock and The Olgas—called Uluru and Kata Tjuta, respectively, by the traditional owners of the area, the Anangu people.

The 440-kilometre, three-hour drive on a paved road with no speed limit was exhilarating. Four of us Americans—three blokes and a woman—hired a four-wheel drive from the Base and experienced the elation and freedom of driving at speeds of almost 200 kilometres an hour as we pretended to be Mario Andretti racing through the outback. There aren't many places in the world that are so remote that you can drive super-fast and not get booked—certainly not back in Maryland or DC. We stopped to see a curious sight that most people on their first visit mistake for Uluru, the table top–looking Mount Connor, a small flat-topped mountain with fairly steep walls known as an 'inselberg'.[6] On the opposite side of the road is Lake Amadeus, a great salt lake so large it's visible from space, its white glossy sheen and 'other world' appearance in stark contrast to the red dirt of Central Australia. The four of us felt like we were on another planet, not just in a foreign country. But nothing could have prepared us for the sight of Uluru when we saw it for the first time. Depending on the time of day, 'the Rock' could be any one of a number of hues: red, orange, brown and even a stunning purple. On this day it was a deep red, with the sun highlighting the ancient markings on its surface. I felt awed by its sheer presence.

As the months passed, I explored the other wonders around Alice Springs, which included Simpson's Gap, Standley Chasm, Ormiston Gorge and Kings Canyon. Alice Springs was also close to the Tropic of Capricorn, and I visited the official painted line next to the Stuart Highway that indicated exactly where this geographical marker was located.

In Alice Springs, I had found a new life that made my time in Maryland seem, in comparison, like a struggle for survival. It was clear to me, though, that the time away from my wife wasn't good for our marriage. Although we spoke to each other almost every day, and the extra money allowed us to pay off many bills, the separation was creating further emotional distance. Four months into my tour, as we

spoke about our second honeymoon in Hawaii, my wife seemed hesitant to meet, saying that she would go to Hawaii but insisting on separate rooms. At this news, I knew our marriage was already over.

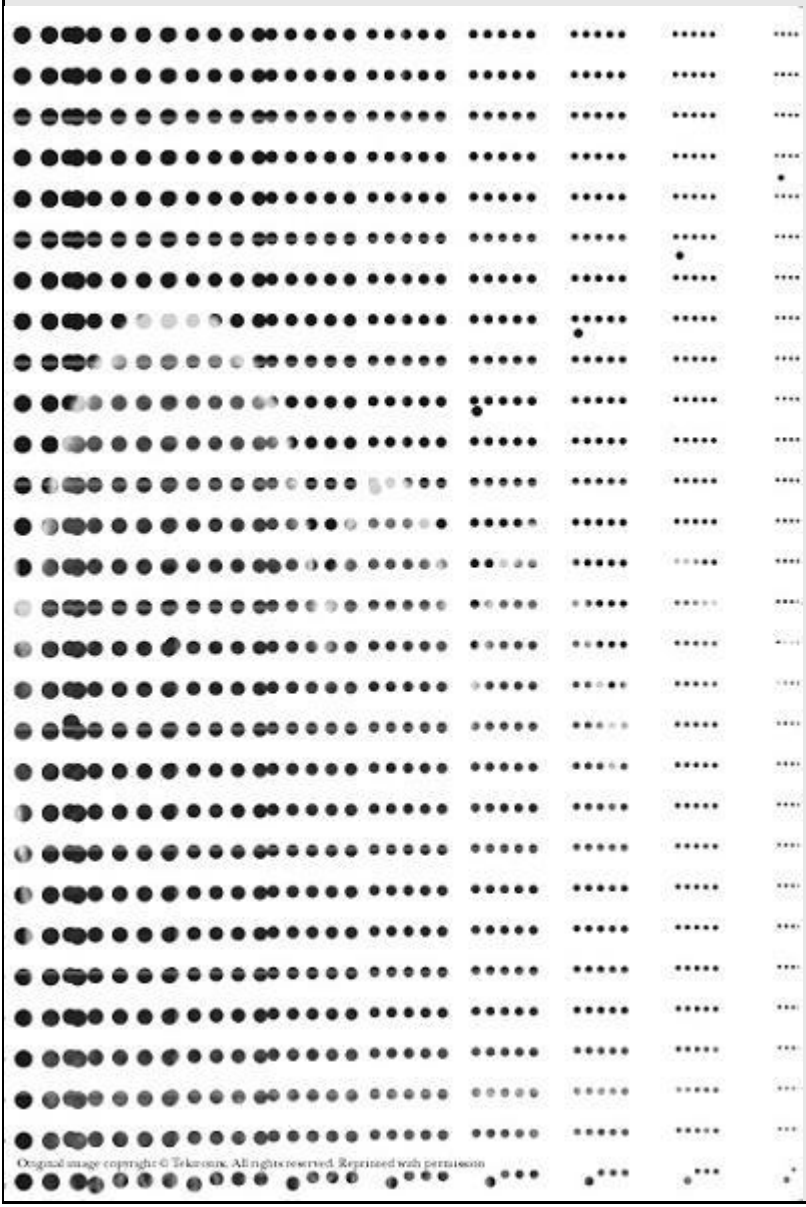
In the end we abandoned all plans for a second honeymoon. I really hadn't expected this to happen, having made the decisions I had —in many ways—to try and save it, and was sad that my marriage hadn't worked out. Fortunately, however, I had made many friends at work and was able to keep busy by participating in various sports, and this helped me to move on. In Alice Springs, I was happy in my new home, I loved my job and I didn't want to leave.

While I was busy discovering my new surroundings, the troops of Operation Desert Shield had positioned themselves for the impending conflict with Iraq as the United Nations–approved campaign appeared likely to begin. I was still apprehensive about potential combat losses as the United States and the coalition of thirty-four nations[7] prepared for a real war with Iraq—a country that in 1991 boasted the world's fourth-largest army, with about 1.2 million ground troops.[8]

Talk within the intelligence community centred on not *if* but *when* hostilities would begin, as Saddam Hussein defiantly held his ground as he described the eventual conflict as 'the mother of all battles'. Those of us at Pine Gap, the soldiers and the world now waited as President Bush and the coalition prepared to expel Iraq from occupied Kuwait and restore independence to this small nation.

PART II:

GETTING DOWN TO BUSINESS



5: GEORGE HW BUSH (1989–92)
Operation Desert Storm; the end of the Cold War

The US army in Saudi Arabia, 1990

Before I arrived in Alice Springs, preparations had already begun in earnest at Pine Gap to support the coalition against Iraq for what would become known as the Gulf War. For the first time, Pine Gap was experiencing a long-term deployment of military personnel to supplement the previous 'civilian-only' Operations population. There had always been a consistent turnover of civilian employees: as those who ended their tour departed, their places were immediately taken by new civilian arrivals attracted by the relatively lucrative incentives on offer to those willing to move to Alice Springs. But the United States Government was taking no chances in ensuring there were enough competent bodies to perform the work in Operations, and the newly arrived American and Australian military contingent (about five when I arrived) proved to be a capable, dedicated and useful resource that supplemented the civilians who historically occupied every billet within Operations.

One segment of the Iraqi military consisted of a large arsenal of Russian-produced Scud missiles, which Iraq had used against Iran during the Iran–Iraq War in the 1980s,[1] and one variable that concerned the intelligence community was that we couldn't accurately predict where Iraq would place its mobile Scuds. We knew the Scud would not be the 'game-winner' for Iraq but if it were used against Israel the Israelis could become drawn into the conflict, possibly alienating some Arab allies. A major objective throughout the intelligence community was to find and locate these mobile Scuds and their associated launch equipment and there was never a moment when the intelligence community was not focused on finding the Scud missiles.

Another more serious concern was Saddam Hussein's use of chemical weapons, which he had previously used against Iran during the Iran–Iraq War and against the Kurds in the north.[2] At Pine Gap, some believed Iraq might become desperate enough to use these unconventional weapons and, if it did, that the United States would retaliate, unconventionally. Fortunately for the coalition soldiers and the Iraqi people, there was no conclusive evidence that Iraq resorted to unconventional warfare during the Gulf War.

When the United States exercised the military option against Iraq it was imperative for the coalition to be prepared with advance intelligence about Iraq's military posture. The military at Pine Gap had a different perspective from the civilians as they were trained in warfare and knew firsthand the dangers of going into battle against a well-armed enemy.

As Operation Desert Shield evolved and the new year arrived, even those of us with the highest level security clearance at Pine Gap didn't know the date and time of the first strike against the Iraqi

military, and although Desert Shield was announced as a defensive exercise, we knew that a real ground war was fast approaching. The hostile action by Saddam Hussein towards neighbouring Kuwait was denounced by almost every world leader and was condemned by the United Nations.[3] The disruption to the flow of oil and the uncertain stability of the oil market was a major concern to world leaders and hastened the huge logistical deployment of the military forces arrayed against Iraq. Everyone I worked with hoped that our role of providing intelligence would help to preclude a protracted war that could—given the size of the Iraqi military—cost thousands of coalition lives.

Australia contributed a relatively small but vital contingent of military troops in the Persian Gulf as part of Operation Damask I & II, which provided the bulk of the logistic and administrative support.[4] The Australian Navy also helped enforce economic sanctions against Iraq that were put in place following Iraq's invasion of Kuwait.[5] Although Australian forces did not experience combat during the first Iraq War, Pine Gap was an essential part of the 'silent' community that was in fact heard loud and clear at the highest echelons in government and by military leaders who were planning the most significant military operation since Vietnam—Operation Desert Storm.

On 29 November 1990, the United Nations Security Council passed Resolution 678, which set a firm date—15 January 1991—by which Iraq was required to leave Kuwait or the use of force was authorised.[6] This resolution supported Resolution 660, which stated, '1. Condemns the Iraqi invasion of Kuwait; and 2. Demands that Iraq withdraw immediately and unconditionally all of its forces to positions in which they were located on August 1, 1990.'[7] Iraq chose not to comply with these resolutions; nevertheless by 15 January, Pine Gap still had not received the date and time of the impending first strike against the Iraqi military.

Strategically, 15 January coincided with the favourable offensive military condition of a new moon that would allow a dark sky for the coalition aircraft and military operations. Two nights later, however, I was at work when the mission director told Operations that Tomahawk cruise missiles had just been launched from naval forces against the Iraqi military. The 'mother of all battles' had begun!

The mission director was at his desk watching CNN while the operators listened to the news with their headsets as the first missile strikes into Iraq were televised around the world. The coalition kept up the bombing campaign for five weeks, critically damaging defensive systems such as SAMs and neutralising the Iraqi Air Force.

My workmates and I were surprised when Saddam Hussein ordered his air force to escape to Iran as we knew that this was a free gift of aircraft to his sworn enemy, most likely never to be seen by him again. We believed Saddam's ally, Jordan, would have been a wiser choice. (By 2011, not one of the aircraft had been returned.[8])

As my colleagues and I found, analysed and relayed information in support of Operation Desert Sabre[9]—the ground phase (soldiers entering Kuwait and Iraq)—the Iraqi military had already been 'softened' with constant bombing from coalition aircraft and highly accurate cruise missile strikes. The Iraqi military was left weary and demoralised by the success of the bombing campaign and resultant sleep deprivation from the recurring blasts, loss of Iraqi lives and destruction of the country's infrastructure.

Utilising intelligence data, the United States Army had penetrated Iraq in advance, performing covert reconnaissance and relaying additional intelligence on the ground prior to 24 February—the day British and American armoured forces crossed the Iraq/Kuwait border and entered Iraq.[10] One day after the start of the ground war, a United States Army workmate said to me, 'We've already lost a thousand soldiers.' He was expecting the worst and overestimated the will of the average Iraqi soldier to fight on after such a brutal initial assault and against such overwhelming odds. I was pleased to discover that his estimate had been wildly inaccurate, while at the same time saddened to hear that, overall, four Americans had lost their lives.[11] The mass surrendering of Iraqi soldiers that was shown on television confirmed how effective the coalition strategy had been to break the fighting spirit of the Iraqi military, and the coalition rapidly advanced into Iraq as the intelligence community continued to provide intelligence in support of the coalition military.

During Desert Storm the coalition lost seventy-five aircraft in total.[12] When an aircraft is shot down over hostile territory, the intelligence community mobilises its resources, including satellite assets, to locate the crew. In these instances, support to rescue and exfiltrate downed pilots and crew becomes the highest priority for the intelligence community. The precedence given to soldiers in this type of immediate danger emphasises the United States Government's concern for their safety.

Downed pilots and their crew often survive a crash by parachuting to safety, with each carrying a 'distress beacon'—a device that transmits a signal whose location can be determined. Some devices can also transmit live voice messages.

President Bush's skills as a diplomat were needed when Iraq

launched several Scud missiles into Israel, a tactic designed to draw Israel into the conflict and unite the Arab world against the coalition. Fortunately for Israel, it astutely played the victim and received world sympathy for the unprovoked attacks. Israel allowed the coalition to exact revenge for the Scud attacks, a tactic that allowed for the continued destruction of its enemy without risking any Israeli lives in offensive operations. Israel obviously saw the bigger picture and didn't want the coalition fractured by alienating the Arab members. As the coalition continued to decimate Saddam's forces, Israel watched its sworn enemy and his military rapidly shrink from the world's fourth-largest army to a beaten and battered shell of what they had been.

Iraq's Scud missiles were a major concern for the coalition, and there was a particular radar often co-located with the Scuds called by the unclassified NATO nickname of End Tray. This radar tracks a balloon as it rises into the upper atmosphere, gathering data on high-altitude wind speeds. The information increases the accuracy of the Scud by adjusting the missile's trajectory before launch and after compensating for atmospheric effects. End Tray is a fairly common signal to locate. Unfortunately the mobile Scud equipment often disappeared into hidden locations before coalition forces could neutralise the Scud batteries, and when hostilities ceased, there was no evidence that conclusively proved that even one Scud transporter erector launcher was destroyed.[13] This result has been studied and the United States has undoubtedly prepared a 'Lessons Learned' report that should enable a more effective response against mobile ballistic missiles in the future. Destroying these mobile systems remains one of the most challenging tasks facing the military. The Scuds caused civilian deaths in Israel and killed twenty-eight American reservists when a missile hit a coalition barrack in Dhahran, Saudi Arabia,[14] resulting in the single largest loss of American lives during the Gulf War. Fortunately for Australia, not one Australian soldier was killed in Iraq or Kuwait during the entire war.

The Gulf War is often called the '100 Hour War' because President Bush declared a cease-fire 100 hours after the ground war began, but at Pine Gap and around the world people reacted to the report of a cease-fire with stunned disbelief. As Iraqi troops retreated from Kuwait, much of the world was outraged as President Bush stopped pursuing the man who had ordered the invasion and looting of his neighbouring country, allowed the killing and kidnapping of innocent Kuwaitis and the rape of hundreds of Kuwaiti women, and ordered the catastrophic burning of Kuwaiti oil fields. Most of us at Pine Gap weren't displeased when we saw the carnage along the 'Highway of Death',[15] as we believed these Iraqi troops behaved less like professional soldiers and more like violent criminals. Ironically,

the reputation of prisoner abuse would later haunt the US military when the infamous Abu Ghraib pictures emerged from the second Iraq War under George W Bush.

I was one of those in shock when President Bush stopped short of removing Saddam Hussein from power, especially when it was apparent that the coalition had control of Iraq. No matter what President Bush said to justify the cease-fire, he simply couldn't convince the general US population that this was the correct decision—it would prove to be a decision that lost him an enormous amount of credibility at home and around the world and was a major factor in his loss pursuing reelection in 1992.

Allowing Saddam Hussein to escape had reawakened the allegations that had appeared during the 1988 presidential campaign: that George Bush was a 'wimp'. And the action did ultimately backfire with Saddam regaining power and President Bush losing his reelection bid. The American public became disillusioned with the once hugely popular President Bush, with Saddam Hussein helping to deal him a humiliating political defeat.

President Bush's reasons for the cease-fire included the argument that continuing the campaign into Baghdad would have fractured the alliance, resulting in unnecessary political and human costs.[16] But at Pine Gap, the intelligence community rumour was that President Bush declared a cease-fire mainly because the influential Saudis didn't want Saddam Hussein removed by force, preferring an internal coup to an American-installed government. The Saudis apparently feared that a democracy installed in Iraq would take hold in the region and would threaten their Islamic absolute monarchy. Whatever the reason, the resultant twelve years of Saddam's continued presence in power provided the United States with a real battle zone over Iraq in which American pilots could practise wartime activities and sharpen their skills, albeit with an 'enemy' that was no longer a serious military threat.

Operation Desert Storm ushered in a potent war strategy for the United States—'Bomb, soften, then invade'—as previous military action had mostly consisted of sending in the ground forces relatively early in a conflict. When the Russians invaded Afghanistan in December 1979, their ground forces entered the country on the same day that their aircraft entered Afghan airspace, capturing the airport at Bagram. The Russians did not bomb any key Afghan infrastructure prior to their invasion, although the KGB—disguised as Afghans—did sabotage many government, military, and media buildings.[17] Protracted bombing campaigns before the use of ground forces would be successfully used later by presidents Bill Clinton and George W Bush. In every case, various facilities around the world would quietly

watch and listen before the conflict, providing communication and weapons-related intelligence to tactical planners in an effort to help minimise the loss of life to soldiers and civilians alike.

As the Gulf War ended, the impending collapse of the Soviet Union meant that the leadership in Washington needed to know who was in control of the launch codes for Russia's mighty nuclear arsenal after the house arrest of Mikhail Gorbachev, and satellites would play a role in getting answers. It was critically important to identify who in Russia was authorised to push the nuclear button, but fortunately the coup failed after three days and Gorbachev was returned to power, only to find that his authority to rule had vanished.

At Pine Gap we rejoiced on Christmas Day 1991 as the Soviet Union disintegrated and the new leader of Russia, Boris Yeltsin, assumed all of Gorbachev's powers, espousing democracy for Russia. As I watched the Soviet flag lowered for the last time over the Kremlin, replaced by the Russian flag, I remember thinking, 'I feel like we've won the Cold War.' And in 1992 the unimaginable actually happened—President Bush and President Yeltsin formally declared an end to the Cold War. This was perhaps President Bush's finest hour, but the achievement wasn't enough to help get him re-elected. American voters wanted change and didn't want a president who had failed to properly finish the job in Iraq.

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As world politics shifted and changed and the world moved forward, I decided to apply for a second two-year tour in Australia. The 'hardship tour' was fast becoming a pleasant experience akin to *The Life of Riley* since, as I've said, agency employees based overseas received very good benefits (seen in Appendix E). This, coupled with extra money from shift work, helped me to rapidly pay for my divorce and allowed me to put money into my Maryland home and other investments. I jokingly told my family that United States Government employees had only three expenses, which I called the Three Fs—Food, Phone, and Fun. My life had finally turned around and the hardship tour had turned into an easy, somewhat catered lifestyle that I was determined to prolong. I had no idea in 1992 that my time in Alice Springs would eventually extend to almost two decades.

Probably one of the reasons life seemed so good was that I had also started dating again after almost two years of avoiding a

relationship—time I really needed, not only to save money and pay for my divorce, but to reflect on life as well. In 1992 I met Colleen in Alice Springs, where she worked at Antica Roma, a local pizza restaurant. She was from Vancouver, Canada and was half-Japanese. Colleen enjoyed the outdoors and had been backpacking around Australia. We travelled within the Alice Springs area, visiting the various gaps and gorges, and once drove out to a remote homestead called Glen Helen that had a rather large lake adjacent to the property—a rare feature in the dry outback. Colleen eventually moved in with me but she had only stayed for a few months when her visa required her to return home.

As Colleen wasn't a US citizen, I had to complete one of the Foreign Contact forms issued by the Office of Security that NSA required me to submit for each romance with a non-American that I considered 'close and continuing'. The United States Government had rough guidelines for this, leaving it to individuals' judgement to determine just what that was. For me, dating Australian or other foreign women was slightly complicated because of this paperwork, which also applied to friendships with non-Americans of either gender who became good mates. I'd been briefed on the possibility of espionage in Alice Springs and was required to submit in writing everything I knew about a person. I sometimes found myself in the ridiculous situation of asking a woman I was interested in, 'Where were you born? When is your birthday? Are you a communist? Have you ever committed an act of terrorism?' Not exactly the language of love!

Shortly after Colleen left for Canada, I planned a long trip to the United States to see my family and friends after having accrued enough home leave for seven weeks of R&R. Almost everyone I knew back home earned between two and four weeks' annual leave every year, and my friends couldn't believe that United States Government employees could take so much paid time off work. This perk of being overseas was a real incentive for me to remain in Alice Springs. Colleen and I kept in touch and a year later I visited her in Vancouver. After a holiday juggling snowballs in the freezing cold and eating elk and moose at her father's home, I was sad to leave. We said our goodbyes and spoke occasionally by phone but we eventually lost contact. It was simply too hard to sustain a long-distance relationship, as I really already knew by then from past experience.

I received approval for my new two-year tour and was now not scheduled to return to Maryland until 1994. My work in analysis and reporting had enhanced my reputation in the eyes of my close-knit community. I had also begun training new operators and received my third promotion, to Grade 12, the highest grade attainable in the NSA

at that time on the more lucrative Government Overseas Engineer pay scale.

With the 1992 presidential election over, many of us at Pine Gap were disappointed to see President Bush leave office, but as President-elect Clinton had won a fair election he deserved a chance to show us how he would lead the country. But President Bush left him with the difficult job of enforcing sanctions against Iraq while keeping Saddam Hussein contained. The legacy of leaving his successor with the responsibility of cleaning up after his fateful decisions in Iraq would be repeated sixteen years later by his son, George W Bush. The Bush presidencies forced many of us in the intelligence community to focus on the 'Iraq problem' for most of my eighteen years in Australia, equivalent to the time it takes a child to grow to an age where they can enlist in the military.

6: BILL CLINTON (1993–2000)
Somalia; Russia; Bosnia-Herzegovina, Serbia and Kosovo; Al-Qaeda

Civil war in Yugoslavia, 1993

Before Bill Clinton had become president, the United Nations approved a United States-led force to guard food intended for the starving masses in Somalia.[1] Africa's worst drought of the century coincided with factional fighting, leaving many in Somalia unable to feed themselves. The resulting famine devastated the country, killing around 300,000 people.[2] The situation on the ground was dangerous, with warlords controlling various portions of the country. When President Clinton took office, it was no secret that the extended intelligence community was looking for various leaders, particularly Mohamed Farah Aideed. Intelligence obtained allowed policymakers and military planners to know some of what was happening on the ground, and the intelligence helped the UN-approved forces to mobilise as safely as possible within lawless Somalia. But Somalia was a 'low-tech' country, and this limited the usefulness of the intelligence community's satellites in that environment.

The resultant 'Black Hawk Down' incidents (helicopters shot down by rocket-propelled grenades) and appalling images of the bodies of American soldiers being dragged through the streets of the capital eventually resulted in the United States withdrawing its forces from Somalia. Although President Clinton couldn't be faulted for these specific incidents, he was responsible for any subsequent actions taken by the US. He pursued Aideed, using intelligence available to him, but his attempts to kill the warlord failed. Aideed eventually died three years later from battle wounds.[3] The complete withdrawal of US troops in 1994 showed that the United States wasn't willing to continue risking American lives in a part of the world where its troops weren't wanted and where it had virtually no control over its strategic interests.

While parts of Africa continued the ongoing struggle to feed themselves, the intelligence community was still concerned with Saddam Hussein, who managed to remain in control of Iraq. The intelligence community continued to monitor Iraq's electronic transmissions, providing valuable intelligence on what was happening on the ground as Saddam remained relatively quiet while rebuilding his power structure.

The United Nations also continued monitoring Iraq's compliance with the Memorandum of Understanding between the United Nations and the Republic of Iraq. This set out to destroy a large portion of Iraq's military arsenal under the auspices of the United Nations Special Commission and the verification of Iraq's stocks of natural and low-enriched uranium by the International Atomic Energy Agency.[4]

Russia was still the focus of much of the wider intelligence community's collection efforts due to its large nuclear arsenal. The

new presidency of Boris Yeltsin was popular in the West, but even though the Cold War thaw continued, Russia still possessed a great number of advanced weapons and continued to develop more capable conventional weapons. The collapse of the Soviet Union didn't mean that Russia's weapons testing program had ceased. The community was still concerned with the pace of testing in Russia, and the intelligence community continued to monitor the testing of many of these weapon systems. The Strategic Arms Reduction Treaty I (START I), begun in 1982 and signed in 1991 between the United States and the Soviet Union, provided that the Russians inform the United States, and vice versa, of the telemetry frequencies used whenever ballistic missiles were test-launched.[5] A statement made in 1988 by Prime Minister Hawke acknowledged this: 'Pine Gap is a satellite ground station, whose function is to collect intelligence data which supports the national security of both Australia and the U.S. Intelligence collected at Pine Gap contributes importantly to the verification of arms control and disarmament agreements.'

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whenever they were positioned against forces that used advanced Russian weapons. The threat of this type of encounter was, and still is very real, as Russian military hardware (and subsequently weapons from other countries) is readily available around the world.

Pine Gap isn't the only collection facility that provides information to the United States and Australian governments. Likewise, traditional adversaries Russia and China also have their own ground-based, naval and satellite SIGINT collection programs manned by operators who look for signals of interest around the clock.[11] The value of these collection sources is recognised around the world, and whether this provides additional justification for the existence of Pine Gap is subjective, but acknowledgement by the highest levels of various governments for the presence of these types of facilities reaffirms their contribution to the security of these nations and their people.

I had read historical data that documented Russia's pace of weapons testing, but with the subsequent collapse of the Soviet Union and the thaw in the Cold War, as Russia established its new identity around the relatively young independent republics. The intelligence community therefore continued to monitor Russia, as weapons testing and production remained integral to its national identity and security.

Another area of interest to the intelligence community was the simmering war in the Balkans and the disintegration of the Yugoslav Republic as Bosnia and Herzegovina declared their sovereignty in October 1991. Bosnian voters then voted in favour of independence from Yugoslavia in a March 1992 referendum that was largely boycotted by the Bosnian Serbs.

However, the religious/ethnic composition of Muslims (44 per cent), Serbs (31 per cent), and Croats (17 per cent) saw a fight for control from within Bosnia, even as the Croatian and Serbian presidents had planned to partition Bosnia between themselves.[12] The Serb minority within Bosnia, along with the invading Serbian Yugoslav army, began a ruthless campaign of ethnic cleansing—expelling or massacring tens of thousands of Muslims.

While the internal war raged for three years, in August 1995 NATO forces began bombing Serb positions within Bosnia.[13] In preparation for this, one of the intelligence community's roles was to discover whether any of the Serb weapon systems had been modified. It was also important to locate these systems and provide this information to tactical planners; satellites would play a role in obtaining this information.

With bombing taking place, NATO aircraft and their pilots were at risk of being shot down by SAMs that were located throughout the Balkans. To help rescue any downed pilots, the intelligence community actively looked for their search-and-rescue beacons when a pilot was in trouble. Our worst fears were realised when an F-16 fighter aircraft piloted by Air Force Captain Scott O'Grady was shot down while patrolling the no-fly zone during Operation Deny Flight. A Russian SA-6 Gainful missile operated by the Bosnian Serb army is credited with the shoot-down that occurred over Mrkonjic Grad, Bosnia-Herzegovina on 2 June 1995. Allied search-and-rescue capabilities immediately mobilised and listened closely for signs of life from O'Grady and his call sign, 'Basher Five-Two', but hope for his safety diminished with each passing day. As it turned out, O'Grady had decided to hide out and delay transmission in case his signal might be detected and located by Serbian forces. Four days later, signs of life appeared when O'Grady's first transmission was confirmed. 'He's alive!' we chorused with relief. There were many throughout the intelligence community who persisted in looking for O'Grady until he was rescued two days later, on 8 June, by Marine helicopters from the USS *Kearsarge*.[14] At Pine Gap we watched the television news and saw the bearded, smiling O'Grady among his fellow soldiers, thankful that his rescue had spared him from being taken prisoner and used as propaganda by the Serbian Government.

In 1996, President Clinton overwhelmingly won his re-election bid on the basis of achievements such as his economic policies, the financial prosperity experienced by individuals and business, his success in negotiating a peace treaty between Israel and Jordan, and the low casualties incurred by the US military in the Balkans.

The intelligence community was concerned with the Balkans for the remainder of the Clinton presidency as many ethnic problems remained. One of our key concerns was another war, sparked when Serbia lost control of the breakaway republic of Kosovo. We were again tasked with supporting military operations as the United States and its allies intervened to prevent another slaughter of civilians in the region.

In 1997, tensions in Kosovo had begun to escalate between the ethnic Albanians (largely Muslim) and the Serbians (generally Eastern Orthodox Christians). In response to continued oppression by the Serbs, the Kosovo Liberation Army (KLA), a militant ethnic Albanian group, began killing Serbs in Kosovo, primarily targeting policemen.[15] The KLA eventually established control over wide areas within Kosovo, and in 1998, Serbian President Slobodan Milosevic sent Serbian troops into Kosovo to reclaim the KLA-controlled areas. President Clinton and NATO decided to intervene, citing the need to

protect others from crimes against humanity.[16] After unsuccessful diplomatic efforts, NATO warplanes began a seventy-eight-day aerial bombing campaign against Serbian forces in Kosovo and much of the weapons storage sites and infrastructure within Serbia. The intelligence community had monitored various Serbian military-related signals in advance of this action, and these were now used by NATO to assess the situation on the ground before starting offensive operations.

The United States was still concerned about the safety of the pilots flying the relatively dangerous missions over enemy terrain that had a large arsenal of Russian-made SAM systems and a fairly competent military. Disaster struck when, on 27 March 1999, a Russian made SA-3 SAM was reported to have shot down one of the United States' most technologically advanced planes, an F-117A Nighthawk Stealth attack aircraft, near the village of Budanovici. The F-117A was designed to sneak through heavily defended areas undetected and attack high-value targets with pinpoint accuracy. Allied search-and-rescue capabilities immediately mobilised to find the pilot. The resulting rescue operation, conducted by several helicopters, successfully exfiltrated the pilot, returning him to safety before he could be captured by Serbian forces. A documentary about the shoot-down, *The 21st Second*, focused on Zoltán Dani, the former commander of the 3rd battery of the 250th Missile Brigade that claimed to have shot down the F-117A.

The circumstances surrounding the shoot-down were more alarming as talk within the intelligence community attributed the event to the Russians, who were rumoured to have supplied the Serbs with the flight plan for this aircraft. If true, this disturbing leak of top secret information would have informed the Serbian forces of the approximate location of the Nighthawk as it flew over Serbia, allowing them to position and prepare their SAM batteries in advance for the kill. The Serbs would certainly have provided the wreckage to the Russians (who were keen to obtain a US Stealth aircraft, or whatever was left of it), inevitably compromising some US Stealth technology. Some of the F-117A wreckage is reportedly on display at the Museum of Yugoslav Aviation close to Belgrade's Nikola Tesla Airport.[17]

The military conflict in Kosovo ended in June 1999 after President Milosevic withdrew his largely intact army following the devastating destruction of numerous government buildings and many infrastructure targets throughout Serbia. The relatively low number of NATO casualties—no fatalities in combat operations—is a credit to President Clinton and the NATO commanders for waging a smart aerial war. The intelligence community had performed well, providing

SIGINT to tactical planners and assisting during the search-and-rescue phase of the conflict.

While the Balkan conflict proved to be a victory for NATO and the Clinton administration, Osama bin Laden's Al-Qaeda terrorist network had quietly but steadily been growing since its establishment some time between 1988 and 1990. It had become a multinational, stateless organisation that called for a global jihad against the West, particularly the United States, and by 1998, Al-Qaeda was suspected of either orchestrating or taking part in several successful terrorist attacks against US targets, including the World Trade Center bombing in 1993, the shoot-down of two Black Hawk helicopters in Somalia in 1993, the bombing of the US military housing complex in Dhahran, Saudi Arabia in 1996, and the United States Embassy bombings in Kenya and Tanzania in 1998.[18]

Bin Laden was already a wanted man, and the intelligence community had been actively looking for him, but this was made more difficult just after the 9/11 terrorist attacks when US Senator Orrin Hatch (R-Utah) told the Associated Press that the United States had intercepted a call between two bin Laden associates that suggested Al-Qaeda involvement. 'They have an intercept,' he said, 'of some information that included people associated with bin Laden who acknowledged a couple of targets were hit.'[19] This announcement proved to be a major blow to the collection of intelligence against Al-Qaeda as Senator Hatch's declaration informed bin Laden that his communications were being monitored and had been compromised. This pronouncement made those of us on the front lines angry and frustrated as our job was suddenly made much more difficult. In spite of his injudicious release of classified information regarding bin Laden's satellite phone, Hatch still serves on the Select Committee on Intelligence.

President Clinton retaliated against Al-Qaeda for the embassy bombings on 20 August with intelligence available to him when Operation Infinite Reach conducted cruise missile strikes against targets in Sudan and Afghanistan. One of these strikes was reported to have narrowly missed bin Laden at a terrorist training camp in Afghanistan. This ineffective first strike did, however, mark the start of a concerted effort against the leadership and structure of the Al-Qaeda network.

The last major attack by Al-Qaeda during the Clinton administration came on 12 October 2000 with the bombing of the USS *Cole*—an attack that the United States had no prior warning of. Finding and dismantling the Al-Qaeda leadership would fall to President Clinton's successor, with our efforts shifting into overdrive

after 9/11.

During the Balkans conflict and the expansion of Al-Qaeda, Saddam Hussein had successfully regained his grip on power within Iraq. Following the first Gulf War in 1991, the United Nations Security Council imposed sanctions against Iraq, insisting on weapons inspectors visiting the country and calling for the dismantling of Iraq's capability to produce weapons of mass destruction (WMD).[20] However, in January 1998, Iraq ceased cooperating with the weapons inspectors, and after diplomatic efforts to resume inspections failed, the United States and the United Kingdom launched Operation Desert Fox in December 1998. This was a major bombing campaign directed primarily against Iraq's weapons research and development facilities and air defence systems as well as weapon and supply storage areas. Another stated goal was to loosen Saddam Hussein's grip on power and replace his regime with a democratic government.[21]

The intelligence community gathered communications and weapons-related information in advance, assessing defence systems, troop readiness and the situation on the ground before the bombing campaign. While the four-day onslaught of sustained missile attacks failed to topple Saddam, most of the targeted sites had been damaged or destroyed. The US and UK pilots received some valuable experience in a hostile environment but suffered no casualties. This was a good achievement considering it was the first combat use of the B-1 bomber and the first time females flew in combat as United States Navy fighter pilots.[22] The women fighter pilots were a valuable, talented resource who proved, unsurprisingly, that they had the same ability as their male counterparts in this type of combat scenario.

The Clinton presidency saw US forces involved in conflicts over a diverse geographical area that included the Balkans, Iraq and Somalia. Sufficient manning was required to support these operations, but towards the end of the 1990s the number of qualified civilian applicants for staff positions in Operations for a two- or three-year tour fell dramatically as some traditional overseas-posting benefits were withdrawn. The reduced incentives contributed to a critical manning shortage, which reached crisis level when qualified operators from the United States had to come to Pine Gap on a temporary basis for three or six months. They would then rotate out and be replaced with other analysts, leaving the manning issue unresolved.

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In the early 1990s, the shift workers had begun to complain to senior leadership about the work schedule, which at the time was a

rotating eight-hour shift of days, swings and mids. Each shift went for seven days straight, which left little time for relationships and leisure. A vote was taken on several proposed new schedules and the schedule that won was a modified three-on, three-off twelve-hour shift. Now we were able to work for three days from 7.30 am to 7.30 pm, have three days off, work three nights from 7.30 pm to 7.30 am, and have another three days off. This required a slight modification to ensure that we worked eighty-four hours in a two-week period. However, the workforce in general was pleased that management had addressed the issue. The new schedule was almost unanimously accepted, and with the extra days off I was able to meet more people and make more friends in Alice Springs.

In 1994 I met an Australian woman (I'll call her 'Karen') who would become my second wife. We met in Alice Springs and I found her to be intelligent, with a good sense of humour. She had a young son and we had many common interests. She also coped well with my work schedule and the fact that I couldn't really talk about what I did.

In order to marry an Australian, I had to ask permission from Security. After several weeks of no response, and about two weeks before my scheduled wedding day, I asked the US chief of security at Pine Gap to find out the status of my request and was soon told that someone had 'put it in a file and forgotten about it'. Eventually, Security expedited my request just in time.

Our wedding at the Olive Pink Botanic Garden went ahead as scheduled in October 1995 and I settled into domestic life again. But with a non–United States wife who didn't hold a security clearance, I was unable to discuss the classified aspects of my work. For the first time, a part of my secret life extended to my family and into my very home, which meant that I couldn't share many of my work-related concerns with my wife.

Karen had an eight-year-old son and shared custody of him with her ex-husband. One reason I remained in Alice Springs for so long and didn't return to headquarters or apply for a different posting was the possible custody conflict that could arise with my stepson's father if I left Australia with my wife and stepson. Not that there was really any inclination on my part to leave as it was easier and more profitable for me to stay put, and anyway I really loved my job! The work was still exciting to me, and on my days off I often looked forward to going back to work.

But less positively, my promotion efforts had been stalled at Grade 12 as the NSA required me to become 'professionalised' in order to be promoted to Grade 13, the start of management/leadership levels. This meant I was required to write an original thesis on a technical subject. I had written several reports on the operational

characteristics of a specific weapon-associated system and used my own previous analysis as the basis for the original material. It took several months to put a final draft together but then I was ready to submit it to the Professionalisation Board at Ft Meade.

I soon arranged a trip to Ft Meade to defend my thesis, where I supported my conclusions and answered questions to show I knew the subject matter in detail. The board told me they were impressed with the content of my paper and that I had passed all the requirements. I was now professionalised with the NSA in my area of expertise (a technical, weapons-related area) and was elevated to Grade 13 during the next promotion cycle.[23] I was now given supervisory responsibility for NSA analysts in my section, who were Grade 12 and below, and I found that I thrived on the new responsibilities of managing the career development of my team members, providing performance assessments and submitting promotion and award recommendations. My new job as a frontline manager and 'working' supervisor fitted nicely into my own career goals as I felt at home working in Operations, doing the 'grunt' work along with management responsibilities. For me, Operations work was infinitely more exciting than any desk job at Pine Gap. With my recent promotion and relatively long tenure at Pine Gap (six years), I became the de facto point of contact for many NSA employees in Operations when they needed advice on workplace issues.

Throughout the 1990s, a relatively new analysis discipline had become necessary at various sites around the world. This type of transmission was quite common, and you didn't need to work for the government to know what the transmission was. When I first saw this in the electromagnetic spectrum, I had no idea what it was. I quickly asked a friend in another section to have a look. He immediately said, 'That might be a [redacted].' A huge crowd swelled around him for a look after the data was identified. [redacted] I was excited about my discovery, and this soon became big news across the intelligence community and various collection sites. About one month later, other sites were now configured to look for these as well. I had given birth to a new analysis discipline at Pine Gap, and this baby would grow rapidly!

In 1996, I felt valued and appreciated by the NSA and was grateful that it had allowed me to remain in Alice Springs for such a long period of time. I had an excellent working relationship with senior management, but my supervisor at the time began insisting that I return to Ft Meade as he believed my career with the agency would stall if I remained in one place for too long. He was convinced that I would not achieve Grade 14 if I remained at Pine Gap. The agency

wanted future leaders to have broad knowledge of its projects and relationships, and taking various assignments was the way to do this, but my desire to keep my family intact and avoid custody issues outweighed any goals of career advancement. This meant that I needed to prolong my tour in Alice Springs as long as possible, and my strategy to do this was to volunteer to move to another position in Operations that was experiencing manning issues and was partially staffed by personnel on 'temporary duty', known as TDYers. (Temporary duty, TDY, is the term used for an employee's travel assignment to a location other than the employee's permanent duty station. It usually lasts for a couple of days to several months but may extend to no more than one year.)

My plan worked and I was soon trained and certified in my new position as operational requirements outweighed my supervisor's concern for my career. He grudgingly agreed with my decision to stay in Alice Springs, and I spent two years performing this new type of analysis. I eventually moved back to my search position when manning problems sent me back as team leader in that section. Manning problems would come and go, and the uncertainty of adequate staffing helped me significantly when my tour was due to end as I requested and was granted yet another three-year tour.

In June 1996, Pine Gap received some positive exposure as Australia's national television network, the ABC, managed to obtain permission to film a documentary about the facility for its news show *Stateline* on the grounds of Pine Gap outside the Operations building. This was the first time a television crew had been allowed to man their own cameras while filming inside the security gates. The documentary was divided into two reports: one discussed the technical role of Pine Gap, and the other discussed the blending of the American and Australian cultures within Alice Springs. When questioned about operational aspects of Pine Gap, the deputy chief, Brian □□□□□, consistently non-answered the questions, frustrating the reporter who was in search of some revealing, never-before-told information about what Pine Gap actually does. She also questioned a senior contractor, Chuck □□□□□□□ about his knowledge of telemetry, asking him, 'I just want to know a bit about telemetry and what that means.' Chuck responded by saying he knew nothing about telemetry, frustrating the reporter yet again in her efforts to elicit some clue as to what happens at Pine Gap. The phrasing of this question was crucial as it allowed Chuck to formulate a simple response that revealed nothing.

Professor Desmond Ball from the Australian National University (ANU) is an acknowledged academic expert on Pine Gap. When Australia's Department of Defence refused to volunteer information about Pine Gap at the Joint Standing Committee on Treaties on 9

August 1999, Professor Ball was called upon to provide information in the debate to renew the treaty allowing Pine Gap to remain.[24] His testimony in 1999 included his description of a portion of the purpose and capabilities of the Pine Gap satellites: □□□□

highlights. His arrival at Pine Gap was a great morale booster for those of us in Operations who were unable to meet with the senior leadership at NSA headquarters due to the remoteness of Alice Springs. He appeared to be very interested in our capabilities, asking many questions about how we performed our work, and seemed impressed with our achievements.

The Clinton years were a period of growth for Pine Gap as Operations expanded. My own career had developed and as well as having increasing management responsibilities and more experience in identifying various signals, I also represented Pine Gap when giving briefings at technical conferences in the United States. For five years I also attended the chief of Operations' morning meeting as my division's representative, briefing senior management on highlights from the division. In 1998 I was nominated by the senior leadership at Pine Gap for the NSA's General Ben Ardisana Collector of the Year award. Pine Gap didn't submit a candidate every year for this award, but I was humbled to be put forward for recognition of 'excellence in the field of collection'.[26]

My original misgivings about President Clinton had turned around dramatically as he proved to be an effective statesman, strengthening partnerships and alliances. Some of his achievements included helping Mexico to avoid bankruptcy, negotiating a peace treaty between Israel and Jordan, and providing leadership to NATO as the coalition achieved their objectives in the Balkans, which in turn helped to avoid the further slaughter of Muslims in that region. Around the world, the United States was generally respected, and individuals and businesses by and large flourished in a climate of economic growth and profitability. President Clinton had also overseen a more rapid rise in government wages to help retain employees, similar to what President Reagan had done in the 1980s. Clinton did, however, enact some budget cuts that affected Pine Gap in various ways,[27] but I believed these inconveniences were a small price to pay in return for the large budget surpluses achieved during his years in office.

At Pine Gap, the 2000 presidential election was divisive among the American military and civilian populations, with the military and ex-military primarily supporting George W Bush and civilians mainly supporting Al Gore. Many of my Australian friends who had seen the debates believed Al Gore acted with smugness and self-importance while George W Bush came across as 'not very intelligent'. They were all quite amused by watching the debates and the debacle that followed the election in the state of Florida but, like many Americans, what they didn't find amusing was the fact that the Supreme Court disallowed a recount to determine which candidate had actually won

that state's electoral votes. In essence, the Court allowed a 'best guess' to determine who would become the United States' next president, disregarding many votes cast by Florida's residents and resulting in a ruling that will forever tarnish the legacy of the United States' highest court. The fact that President Bush's brother Jeb was the influential governor of Florida also made it apparent to many that the decision to stop a recount wasn't impartial.

The Supreme Court's decision to allow a disputed election to stand unresolved in the minds of many voters would cast a shadow of illegitimacy on President-elect Bush that would deepen partisan lines in the United States for the next eight years. However, with the disputed presidential election decided by the end of 2000, President-elect George W Bush was handed an economy that was strong and an America that had won 'hearts and minds' around the world under the leadership of President Clinton. How President-elect Bush would build on those would partially determine his legacy.

7: GEORGE W BUSH (2001–08)
China; Afghanistan and the War on Terror; Iraq; North Korea

Smoke billows from the World Trade Center, 11 September 2001

Throughout the presidential transition in 2001, new threats continued to emerge that required monitoring by many resources in the intelligence community. Russia had recovered from the political transition from communism to democracy and the pace of its weapons testing had accelerated as the millennium came to a close. China had experienced a huge surge in technical capability through various means and was developing more reliable and more accurate weapon systems, including ballistic missiles, cruise missiles and SAMs.

Iraq remained under constant surveillance as well, with antiaircraft systems always a threat, albeit a minor one, to allied aircraft that patrolled over the no-fly zones. The United States was also concerned that Saddam Hussein might resurrect his WMD program and didn't want to miss any developments with this or the L29, an aircraft that could be either piloted or flown as an unmanned aerodynamic vehicle (UAV). This aircraft had been assessed as a possible chemical–biological weapons delivery platform.[1]

Libya also continued testing its short-range ballistic missiles from the Al Qaryat launch complex while Iran began testing a plethora of missiles based on Chinese and North Korean models with help from those countries' missile experts.[2] Iran had accelerated its testing of cruise missiles, SAMs, battlefield rockets and a host of ballistic missiles as it strived to develop longer-range missiles.

The list of potential threats was extensive, but perhaps the greatest threat to US forces came from North Korea, a secretive country with a reclusive leader and 1.2 million armed soldiers, making it the fourth-largest standing army on Earth and the world's most militarised country.[3] North Korea was also actively developing cruise and ballistic missiles that posed a real threat to the region. The threats confronting President Bush were assessed by policy planners to be very real, and these developments were just some of the concerns facing the intelligence community that would have to be addressed throughout the Bush presidency.

The first foreign policy crisis facing President Bush occurred on 1 April 2001 when a United States Navy EP-3E Aries II surveillance aircraft collided in midair with a Chinese J-8II interceptor fighter jet. The badly damaged EP-3E was forced to make an emergency landing on China's Hainan Island, but the collision between the two aircraft resulted in the death of the Chinese pilot, Lt Cdr Wang Wei. His body reportedly was never recovered.[4] The intelligence community immediately mobilised to discover the fate of the twenty-four crew members and the EP-3E. The EP-3E contained sensitive intelligence-gathering and cryptologic equipment that would need to be destroyed quickly by the crew before landing and while on the ground at Hainan.

one reason why the grounded aircraft was dismantled, remaining in China until 3 July. In order to help defuse the situation and return the crew to the United States, President Bush issued China with what was called the 'Letter of the Two Sorries', stating that the United States was 'very sorry' for the death of Chinese pilot Wang Wei, and 'very sorry the entering of China's airspace and the landing did not have verbal clearance'.[5]

Just five months after the Hainan Island incident an event occurred that shocked the world and placed stressful demands on everyone within the intelligence community. The terrorist attacks in the United States on 11 September 2001 (now known as 9/11) occurred when members of Osama bin Laden's Al-Qaeda terrorist network hijacked four passenger aircraft in the United States, crashing two of them into the twin towers of the World Trade Center and a third into the Pentagon. Passengers on the fourth aircraft successfully overpowered the hijackers, forcing the aircraft to crash in an open field near Shanksville, Pennsylvania. The courageous heroes who foiled the terrorists' plans onboard United Flight 93 would never know that their heroic actions had just saved one of the most beloved shrines dedicated to democracy, the United States Capitol building. The remaining three planes piloted by suicide terrorists had successfully carried out the most devastating terrorist acts in history, killing approximately 3000 people. An attack of this scale, whether it had occurred on American or Australian soil, was always going to mobilise all members of the intelligence community to identify and locate those responsible.

Al-Qaeda had remained a known threat, but the extent of the organisation had not been completely identified. Unfortunately, when 9/11 occurred, the majority of the leadership in each US intelligence agency believed that they had 'exclusive ownership' of the intelligence obtained by 'their' agency. This was a problem that had been known for decades and was systemic within the intelligence community. William C Sullivan, a former assistant director of the FBI, described how each intelligence agency erected barriers that 'led to a condition of total isolation for each organisation… All of these little empires in the intelligence community—the FBI, State Department, NSA, and the others—had built fences around themselves. I had never seen anything like it. We wouldn't share our information with anyone, and no other agency would give us anything.'[6]

These barriers fractured the structure of the intelligence community, preventing adequate, timely sharing of intelligence and the collaboration that was required to piece together the indicators of

an impending terrorist attack. The resultant lack of confirmed, specific intelligence of any Al-Qaeda threats within the United States left the country vulnerable to the catastrophic events that occurred on 11 September. After decades of each intelligence agency compartmenting the intelligence obtained by 'their' sources, it took the events of 9/11 for there to be a genuine attempt to break down the barriers within the intelligence community and open up the lines of communication. Hopefully the lessons learned will not be lost on future leaders.

I was at home when the attacks occurred, and I remember turning on CNN and seeing the Twin Towers turn surreal as smoke from the burning planes enveloped their upper sections. As I watched the story develop, I suspected who was responsible for carrying out these attacks, and I phoned a friend in the United States to talk about what had happened, staying on the line until the link from my telephone company was severed due to the overload of telephone calls in response to the attack. I told him this was most likely the work of Al-Qaeda. Coordinated attacks, maximum destruction on a large scale and an overt agenda against America were excellent indicators that this was the work of Osama bin Laden's terrorist network.

As the Towers collapsed, my feelings of anger and revenge had me hoping that President Bush could quickly prove who was responsible—and retaliate with deadly force. But the United States' response would come later, after conclusive proof was obtained that Al-Qaeda operatives were behind the attacks. Unfortunately, this necessary delay gave the Al-Qaeda and Taliban leadership time to move to secure hiding places.

I watched the news until about 3 am, then attempted to get some much-needed sleep before waking at 6 am. I was scheduled to work a twelve-hour day shift and was eager to find out what my role would be. Unsurprisingly, thoughts of the attack kept me awake all night, and in the end I headed into work running on adrenaline—sleepless but nevertheless wide awake.

It was the most sombre ride to work I had taken in eleven years. On the drive in, the terrorist attacks were the only topic of conversation and the driver had the news turned up louder than usual. Everyone was either listening to the latest reports or talking about what they had heard from their families. Our families in the United States were fearful of more attacks and they wanted to know what we at Pine Gap could tell them that they had not heard on the news; they were convinced we would know much more than what was broadcast on CNN. However, CNN found out about the attacks before we did, and besides saying that we believed Al-Qaeda was responsible, our advice in general was to keep watching CNN. This wasn't very reassuring to those who believed the United States was always one

step ahead of our adversaries—or, for that matter, CNN.

Like almost every United States Government and military facility, 9/11 forced Pine Gap to make security checks more thorough, and when I finally arrived in Operations the atmosphere was all business. As reported around the world, the intelligence community had a new goal—to hunt down those behind the attacks. My colleagues and I assisted in this task and in identifying specific threats. Make no mistake, Australia and America are blood brothers, and the Australians I worked with were as committed as the Americans to destroying the Al-Qaeda leadership and their network.

Afghanistan had been identified as bin Laden and Al-Qaeda's base of operations, and they were supported and protected by the Taliban leadership. When the United States sought justice for the 9/11 attacks, Afghanistan would again bear the brunt of a large military invasion. Fortunately, war-torn Afghanistan with its outdated military equipment had no hope of fighting off the American and coalition forces, but the United States needed to neutralise its ability to launch SAMs, which would keep the skies relatively safe for bomber and surveillance aircraft.

President Bush would effectively rally the country to the call to destroy the terrorist organisation that had been the mastermind behind 9/11, and he was poised to garner world sympathy and military/ logistical aid for Operation Enduring Freedom—Afghanistan in the battle against Al-Qaeda and the Taliban. A small portion of the world was seen on the news rejoicing at the destruction within the United States, but the majority of world leaders knew that a similar attack was possible anywhere. The sobering terrorist attacks of 9/11 resulted in more than forty countries providing troops and logistical support[7] as the United States prepared its forces for battle in the mountainous land of Afghanistan with the goal to remove the Taliban and destroy the Al-Qaeda leadership and infrastructure.

Analysts at many agencies worked diligently assessing Afghanistan's weapon systems and communications networks as those of us in the eavesdropping intelligence community prepared for the subsequent bombing campaign that began on 7 October. Soon after hostilities started, coalition aircraft neutralised any threats to overflights of Afghanistan, with bombings continuing unabated. With help from Northern Alliance ground troops, the Taliban collapsed on 9 December, and the United States and those countries providing troops to Afghanistan now had the job of occupying the country and rebuilding the government and infrastructure.

The hunt for Osama bin Laden, his deputy Ayman al-Zawahiri and the Taliban leader Mullah Omar, continued during the occupation. President Bush vowed 'to smoke them out',[8] a threat he repeated on

several occasions as US citizens demanded justice for the attacks. In order to destroy both the terrorist leadership and the cohesiveness of the Al-Qaeda network, it was important above all else that these three men be captured or killed quickly.

The American Government ultimately killed bin Laden in a daring military operation deep within Pakistan almost ten years after the horrible events of 9/11. But the inability of the intelligence community to find and capture or kill bin Laden (and, for that matter, al-Zawahiri and Mullah Omar) soon after 9/11 was a significant intelligence failure that allowed Al-Qaeda and the Taliban to remain intact, to continue to terrorise innocent civilians and to plan for successive leadership. The search for al-Zawahiri and Mullah Omar was still continuing almost ten years on.

With the newly declared 'War on Terror', Afghanistan would continue to consume a large number of intelligence resources for many years, but with no real military threat remaining within Afghanistan, our priorities shifted and we moved on to search for other threats.

Relatively early in the new millennium, one of my Aussie team members happened to find a new □□□□□□□□□□ signal. I was very familiar with this system and decided to examine the characteristics—immediately recognising that something about it didn't look as I had expected. I alerted my co-workers on an adjacent position and asked them to confirm my observation and collect some data, which soon determined it to be a significant modification to a known threat system. We alerted another site in the United States and they confirmed our findings. We had worked well with them before and a strong sense of cooperation and collaboration existed between the two sites. Unfortunately, after our discovery a petty and unnecessary competition ensued between the two sites as we each tried to receive credit for the new discovery.

When I noticed the new characteristics, I thought they may have been seen before but I believed perhaps the operators working that day might not have noticed the subtle differences. So I reviewed some of our earlier data and, sure enough, we had seen it more than once, about one week earlier. Even our resident expert for this system had missed this modification after looking directly at the data! I immediately wrote a report on our earlier data, and after obtaining more information over the next two days, we decided it was sufficiently distinctive to warrant a unique name to distinguish the new system from its similar counterpart.

Meanwhile, the other site had read our report, reviewed some of their own previous data and found that they had seen this new

emission a day or two before our initial intercept, and they hastily prepared a report assigning their own name as they wanted to beat Pine Gap to the punch! We then issued a much more detailed report using our unique name, which resulted in two names being used for the same system. When this happens in the intelligence community, the NSA is the deciding body that determines which name will be used and which will be cancelled. The other site claimed 'first night's rights' as they had seen the characteristics before Pine Gap, although without input from Pine Gap they would have been clueless that they had intercepted anything new. But as Pine Gap had identified the characteristics first and immediately informed the other site, we believed credit for the new discovery should be given to us.

NSA soon returned their verdict: Pine Gap lost the name battle and the other site's name would be used because they had seen the signal first, regardless of any assistance they received from Pine Gap. My colleagues and I simply continued to use our name anyway, in silent protest, until a permanent name replaced the NSA-approved temporary name. The physical separation between Pine Gap and NSA headquarters often resulted in insufficient advocacy for our analysis results, a problem that still hadn't been rectified by the time I left in 2008. But from then on our reporting methodology changed and we began issuing 'quick and dirty' reports whenever something new was found, with the caveat that a new name would be issued if subsequent analysis results deemed it necessary. The working relationship between the Operations personnel of the two sites suffered from mistrust and a lack of sharing of data (as was generally found in the intelligence community pre-9/11) for more than two years because the other site didn't acknowledge the assistance made available to them from Pine Gap. By contrast, the operators at Pine Gap were recognised by senior management, and analysts on the team were presented with a team award.

The discovery that caused so much controversy and temporarily damaged the relationship between our two sites turned out to be emitted from a modified weapon system that was expected to be exported from the large weapons-producing country in question.

With help from the United States and its allies, the fledgling government in post-Taliban Afghanistan was struggling to establish legitimacy and some degree of control within its country. Meanwhile, President Bush had begun to make accusations that Saddam Hussein and Iraq were linked to the Al-Qaeda terrorist network. President Bush apparently believed, and wanted the world to believe, that Iraq posed a threat to the United States. He then claimed that Iraq had purchased yellowcake uranium from Niger and the country was somehow

rebuilding its chemical and biological weapons stockpiles. About seventy-five senators had been told, in closed session, that Iraq had the means of attacking the eastern seaboard of the United States with these weapons, delivered by unmanned aerodynamic vehicles. All of this would prove untrue.[9]

The intelligence community had been concerned with Iraq since I arrived in 1990. In January 2003, rumours of an invasion had changed to threatening words when President Bush stated of Saddam Hussein: 'He is a danger not only to countries in the region but… because of his Al-Qaeda connections, because of his history… [also] to Americans. And we're going to deal with him. We're going to deal with him before it's too late.'[10]

The intelligence community had prepared in advance, with intelligence collection tasking in place, and knew some information about the situation on the ground before the Iraq War air campaign began on 20 March 2003. Meanwhile, it was known that Iraq had acquired the Aviaconversia GPS jamming equipment from Russia, in violation of the twelve-year ban on sales of military equipment to Iraq.[11] These jammers are designed to disrupt the flight of weapons that use the GPS signal for navigation and were placed in various locations throughout Iraq.[12]

Effective GPS jamming signals have the capability to render almost any GPS device useless if navigation ability depends solely on receiving the valid signals from orbiting GPS satellites. The intelligence community wanted to know the characteristics of this signal from Iraq in order to assess its level of sophistication and develop countermeasures. Satellites just happened to provide an excellent means to intercept this electronic transmission.

The GPS jamming signals were often mounted on towers. Most were destroyed, some with weapons that even used GPS for guidance.[13] The jammers, however, were deemed to have played an insignificant and non-deciding role during hostilities as other methods could compensate for a disabled GPS guidance system.[14] In the final assessment, the cost of the weapons used to destroy the jammers was quite high, especially for a device that didn't have a game-changing role in the outcome.

With hostilities underway, the intelligence community actively searched for members of Saddam Hussein's former leadership circle, hoping to find the fifty-two faces on the deck of cards presented by the Bush administration.[15] In a stable country, target signals are mostly understood and are quite predictable, but in a country that had been overrun with invading forces, with a military that had been shattered, communication methods were forced to change, as the

destruction of a country's infrastructure, particularly power generation, limits the number of electronic signals that can be conveniently transmitted.

When the United States and its allies invaded Afghanistan after 9/11, I believed this was the correct course of action because it had been shown that Al-Qaeda was behind 9/11 and they were supported and protected by the Taliban. They had essentially committed an act of war against the United States that required a military response which had been sanctioned by the United Nations. I was, however, not confident that President Bush's claims that Iraq had been allied in some way with Al-Qaeda were true, nor was I convinced that Iraq had any WMD.

I was also concerned that President Bush had failed to gain UN approval for military action against Iraq; this greatly reduced the aid the United States would receive from potential allied countries, both in military personnel and logistical support. I was also fearful of the massive cost of the potentially long-term aftermath. The great question of 'What will we do, and what will happen *after* we have successfully occupied Iraq?' troubled me. I was simply not convinced that the Bush administration knew the answer.

During my time with the NSA, I had read reports on many military-related subjects, including those that I did not have a 'need to know' about but which were classified at a relatively low level. Some, on subjects not dissimilar to tomato smuggling in a Third World country (fictitious but based on an actual, similar report), were ones that I can safely say I didn't really *want* to know about. But as part of the intelligence community, I had also read reports about WMD within Iraq for over a decade and I had never read a report concluding that Iraq had any WMD after 9/11. This was echoed by Lindsay Moran when she described a fellow CIA officer who had worked on Iraq's WMD program for more than a decade. 'She admitted to me, unequivocally,' said Lindsay about the officer, 'that the CIA had no definite evidence whatsoever that Saddam Hussein's regime possessed WMD, or that Iraq presented anything close to an imminent threat to the United States.'[16]

This relatively low-level analysis directly contradicted what the leadership in Washington was saying. 'There is no doubt that Saddam Hussein now has weapons of mass destruction,' said Vice-President Dick Cheney on 26 August 2002. 'There is no doubt he is amassing them to use against our friends, against our allies, and against us.' Secretary of Defense Donald Rumsfeld said something similar: 'We know they have weapons of mass destruction. There isn't any debate about it.' CIA Director George Tenet provided his own grim warnings

in a secret hearing before the Senate intelligence committee on 17 September: 'Iraq provided al Qaeda with various kinds of training—combat, bomb making, and chemical, biological, radiological and nuclear.'[17] Where did their conclusive evidence come from?

These same senior officials are ultimately responsible for ensuring that accurate intelligence is provided to them, vetted to certify that what they are told is both truthful and the best assessment. But rumours abounded that President Bush had wanted an excuse to invade Iraq since he was installed as president. An inside source within President Bush's administration, Treasury Secretary Paul O'Neill, discussed the President's case for war on an episode of *60 Minutes* on 14 June 2006 and was quoted by Ron Suskind in his book *The Price of Loyalty* as declaring the President's early agenda for war. 'From the very beginning, there was a conviction that Saddam Hussein was a bad person and that he needed to go,' O'Neill said, before adding that, ten days after the inauguration—eight months before September 11—going after Saddam was 'topic A'.[18]

Many die-hard Republicans have told me that the Bush administration will be remembered for its legacy of being wrong, misleading the American people and the world, and making many wrong decisions that had global impact. The evidence of this is apparent and overwhelming.

Senior government officials want to please their president, and in hindsight these officials were apparently more committed to providing information to the President that he wanted to hear, rather than ensuring that the information was true, vetted and accurate. In order to provide effective intelligence, a 'please the boss' mentality must be balanced, and in fact is secondary to a commitment to provide accurate, vetted intelligence. Senior policymakers must have the inner strength to disagree with others, including the president, and must seek conclusive proof when they are unsure of the facts, especially when military action—and potential loss of life—is likely to result.

After the air campaign in Iraq began, I spoke with a friend in the United States, discussing my concerns about the justification of invading Iraq as I was worried that President Bush was dead wrong. Saddam Hussein had politically defeated President Bush's father and was alleged to have tried to assassinate the elder President Bush when he visited Kuwait as a private citizen in April 1993.[19] I told my friend that I hoped ground forces would find the elusive WMD after the United States entered Iraq or else President Bush's credibility would be reduced to nothing and America's reputation around the world would plummet further. I believed President Bush was taking a very high-stakes gamble because if no WMD were found in Iraq, it would look as if President Bush had lied with the intent of using the

mighty US military as a means to exact personal revenge for his father against Saddam Hussein; this, at the expense of countless brave, young soldiers who believed they were fighting for a legitimate, worthy cause. 'You do not go to war on a hunch,' I told my friend. But as commander-in-chief, President Bush did just that.

The invasion of Iraq effectively ended on 15 April 2003 when Saddam Hussein's hometown of Tikrit was captured. The occupation of Iraq had now begun. On 1 May 2003, President Bush made a dramatic landing in the co-pilot's seat of a Navy S-3B Viking onto the USS *Abraham Lincoln* where a large 'MISSION ACCOMPLISHED' banner loomed behind him as he emerged from the cockpit, subsequently declaring victory in Iraq.[20] I watched this in amazement and disbelief, knowing that the mission in Iraq had not yet been accomplished as military forces were still fighting and US troops did not appear to be leaving in the foreseeable future. There was no stable government in Iraq and nothing was certain on the ground, so to me it looked like we had a long way to go. I believed President Bush had suffered another credibility problem and that his 'mission accomplished' declaration was grossly premature.

Although I had concerns that President Bush's reasons for invading Iraq were groundless, my colleagues and I continued to perform our roles to the best of our ability: the lives of American and allied soldiers were our highest concern and everyone in the intelligence community shared this priority.

While President Bush declared victory, the US military was still part of the ongoing mission (not yet accomplished) to search for and find Saddam Hussein. US forces were using UAVs and Saddam's familial and tribal ties to help identify where he might be hiding. Finally, on 13 December 2003, Saddam was captured near Tikrit in Operation Red Dawn,[21] and after questioning by US intelligence officers and a subsequent lengthy trial, he was found guilty of crimes against humanity over the killing of 148 Shi'ites from the town of Dujail in 1982. On 5 November 2006, he was sentenced to death by hanging and on 30 December 2006 he was executed at Camp Justice.[22]

It is tragically ironic that both President George HW Bush and President George W Bush left their successors with the burden of ongoing problems in Iraq—one through incomplete action, the other through what proved to be an unjustified invasion. Iraq had become a dismal, expensive legacy for both presidents, and one that impacted on our work in Operations throughout my time in Alice Springs.

With a large number of US weapons employing GPS receivers to help guide them to their targets, jammers designed specifically to cripple GPS-guided weapons now began to appear around the world,

and as Saddam Hussein was driven from power, the intelligence community continued to study their effectiveness. The United States was aware that GPS jammers were being used and employed backup methods if the GPS receivers failed.[23] This backup ability was one reason why the Iraq GPS jammers had an insignificant effect on American weapons during the Iraq War.

While many countries continued to develop GPS jammers, Iran realised the importance of UAVs and accelerated the development of various UAVs designed for surveillance and offensive operations. The Mohajer[24] and Ababil[25] are two UAVs that Iran has extensively tested.

The intelligence community takes a great interest in weapons development in Iran and actively searches for anything associated with new weapon developments in this country.

Iranian television showed a video reportedly filmed from one of their UAVs that made its way onto YouTube.[26] This UAV was reported to have overflown a US aircraft carrier while transiting the Persian Gulf in August 2006. The video claimed that seven aircraft had been scrambled to shoot down the UAV, but the UAV was able to 'fly back to its base'.[27] The apparent claim by Iran that its slow-moving UAV 'outran' seven (fighter) aircraft is laughable. As this particular UAV was not 'weaponised', the US military 'let it live'. If the carrier had wanted to shoot down the UAV, it would have.

The rise of China on the world stage, both economically and militarily, had continued throughout the presidencies of Clinton and Bush, with China beginning flight and radar testing of two Airborne Warning and Control System (AWACS) aircraft using Russian IL-76 and Chinese Y-8 aircraft.[28]

In 1999 China had an apparent deal with Israel to purchase the Israeli Phalcon AWACS and had even flown a plane to Israel where the radar was installed.[29] The transfer of such an advanced system (along with United States–financed technology) to China caused a political firestorm, with the White House exerting pressure on Israel to cancel the deal, which it reluctantly did, but not before Chinese technicians had learned some basic operational characteristics of the Phalcon radar.[30] This theoretically allowed the Chinese to assemble a radar based on the Israeli design, but development of the Chinese AWACS stalled in 2006 when an IL-76 AWACS crashed, tragically killing all forty technicians and crew members.[31] Development continued after technicians were able to examine the cause of the crash.

There was much discussion in the media as to whether some form of technology transfer had occurred, and these thoughts were of course discussed within the intelligence community, with technical analysis providing key insights. □□□□

Pakistan, Iran, Yemen and Syria, providing its weapons expertise to these nations as well. With numerous weapons testing facilities around the country, it is no secret that North Korea remains very high on the list of countries monitored by the intelligence community.

President Bush effectively rallied the United States and many allies to help America battle Al-Qaeda and the Taliban after the 9/11 attacks, and the number of young men and women enlisting in the US military to fight terrorism and defend their country was extraordinary. America was grateful for the ensuing assistance in Afghanistan, but in Iraq some American soldiers were involved in the degradation of prisoners, most notably at Abu Ghraib prison.[37] This disregard by a small percentage of American soldiers for traditional American values and international standards (most notably the Fourth Geneva Convention[38]) relating to the treatment of protected persons ultimately resulted in a backlash against President Bush and the United States.

America had changed under President Bush, and this was succinctly expressed by a popular columnist who reported this fundamental shift of American traditional policy shortly after the start of the Iraq War:

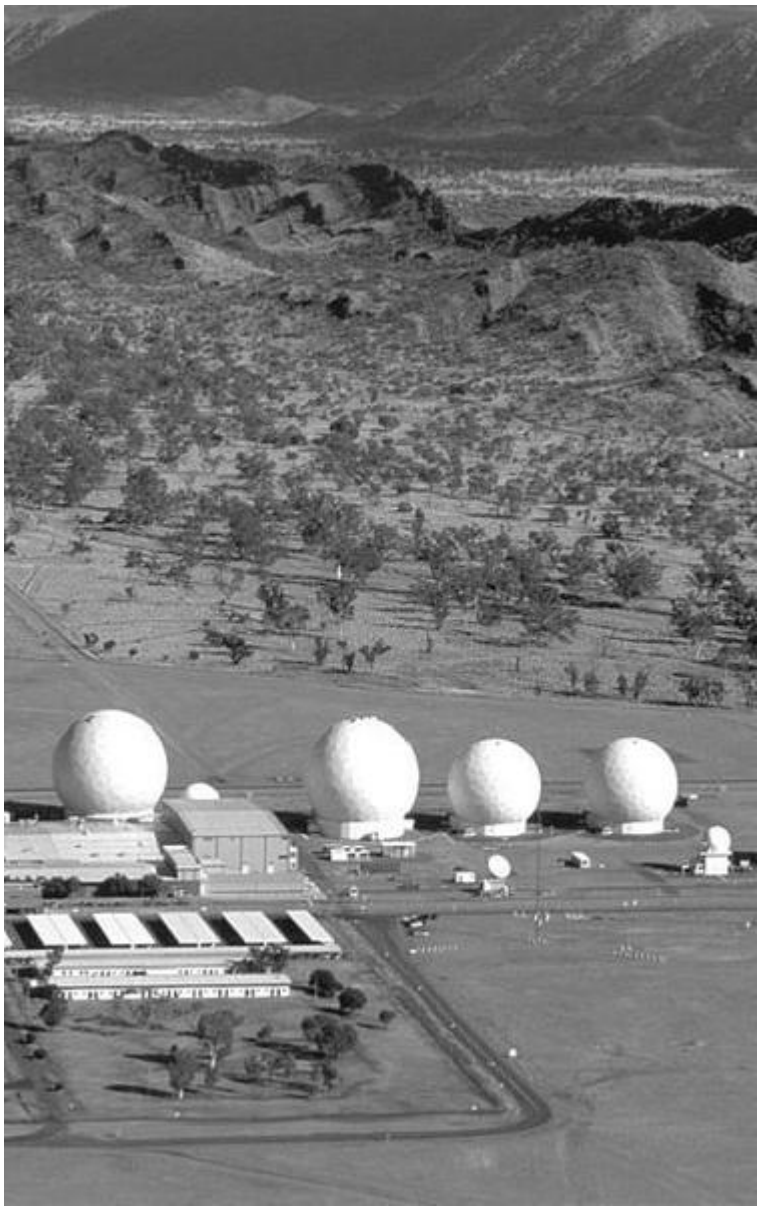
> For better or for worse, a new nation will be born here. And it will be different from the one it supersedes. For the first time in its history, the United States has claimed for itself a doctrine of preemption, the right to hit first any nation we suspect of hostile intent… But the new nation being born here is not just a product of the Bush Doctrine. It's also the product of Washington's recent taste for unilateral action. As the old order passes, it evidently takes with it any inclination on America's part to embrace a role of constructive leadership as part of the community of nations… we stand on the edge of a change that feels fundamental, profound and permanent. We are a giant that is no longer inclined to watch its step. Less involved with or concerned by the world around us. We are becoming a go-it-alone nation, a don't-give-a-damn-what-anybody-else-says nation. And ultimately, because of that, a frightening nation… But beneath the veneer of normalcy we watch and wait and pray that Washington knows what it is doing. We need for George Bush to be right and those of us who are doubtful to be wrong… Time will tell. In the meantime, bombs fall. Missiles fly. And in the thunder of their explosions, the old America passes.[39]

'We need for George Bush to be right' indeed. The United Nations'

failure to support the United States when President Bush called for the removal of Saddam Hussein based on inconclusive evidence further degraded both the credibility and influence of the United States among long-established allies. The US leadership had truly lost its footing and traditional American values. The 'cowboy diplomacy'[40] that so well characterised President Bush's eight years in office —'You're either with *us* or you're with the terrorists'—was a simple man's outlook on a very complex issue that alienated the United States from many traditional allies who may otherwise have been persuaded to support the United States in the bid to oust Saddam Hussein. I personally felt offended that President Bush was telling me that if I disagreed with his policies, I supported the terrorists. This was patently untrue. One inalienable right that made the United States a great nation was the freedom to disagree peacefully with the government, but President Bush had just told me I was not allowed to disagree with his policies. If I did, I was 'with the terrorists'. This was no longer *my* United States.

Most of the decisions made throughout the Bush administration stirred personal feelings in me that echoed those of Lindsay Moran: 'Truth be told, I was no longer particularly proud to be an American.'[41] The old America had passed; and although the love for my country would never leave me, like Lindsay, I did not like many of the decisions made by President Bush.

8: CAREER'S END/GOING NATIVE



At home on 'the Base'

Throughout the Bush administration, my technical capabilities developed as I gained additional experience with various weapon systems. I also obtained more management responsibilities within my

division as I assessed how my team performed tasking and how existing work processes could be improved. I became one of the premier subject-matter experts in my field, consistently finding and reporting a large number of new and modified threat systems that were of great interest to our counterparts in the intelligence community and senior government policymakers. I also continued to represent Pine Gap and our accomplishments, presenting analysis findings at various technical weapons-related conferences in the United States. As far as I was concerned, I really was living the dream career.

In the intelligence community, my reputation continued to grow and my contributions were acknowledged with several cash and team awards for my collection efforts. In June 2004 this culminated in my fifth promotion (my third while stationed at Pine Gap) to a higher leadership position, Grade 14; my colleagues and I had viewed this as a next-to-impossible achievement as the NSA typically considers diversity of assignments a prerequisite to achieving Grade 14.

The necessity of the NSA and other agencies to develop and retain technical subject-matter experts is recognised to some extent, but senior management is often unwilling to promote those who choose the technical, vice-management/leadership path further than Grade 13. A very senior former CIA officer recognised this and elaborated:

> We need to recognize that perhaps a number of officers should spend their careers in only one or two countries, becoming the experts they need to be. We got so worried about the possibility that our officers would go native that it is nearly impossible to find officers who stay more than three years in any one country. We used to have numerous officers who made their entire career serving in only one geographical component. That practice fell to the broadening experience that came to be one of the precepts toward promotions.[1]

Since I had spent the last fourteen years at Pine Gap, I wasn't expecting another promotion and was actually concerned that I would now be promoted out of Operations and into a day job as I had been performing the role of 'technical manager' for several years. I was in fact soon asked if I wanted to take the day job of division chief when it became available, but I declined as I preferred the work in Operations and would no longer receive shift work pay. Moving from shift work to days also meant that I would work five days per week rather than three and a half days. This coupled with less pay were two factors that influenced my decision.

I was later asked if I would take a position as mission director. If I

accepted, I would be responsible for ensuring that my crew was effectively performing its duties, would help to resolve any conflict that occurred within the team and with our counterparts overseas and would be responsible for initiating and directing emergency procedures should the need arise. I declined the offer for the simple reason that the 'desk job' responsibilities were relatively boring to me, and I knew that most of the operators had an excellent work ethic. The team members on all crews in general worked very well together and Pine Gap was a very reliable facility. The number of times we went into lockdown from a perceived threat was very rare. Power generation was also reliable, as over the course of my eighteen years in Operations we lost all power to our section only once, but the matter was resolved in just over one hour. I was at work when this occurred and the coolheaded female mission director calmly and effectively followed the never-before-used procedure to bring us back online.

The mission director position was also one that, apparently, I wouldn't have to be awake to perform. Several mission directors were notorious for sitting in their chair, elevated above the other positions so they could effectively oversee the operators, but sleeping for several hours straight during the night shift while the operators continued to perform their jobs. Once, a mission director tipped over while asleep with the resultant crash inspiring one operator to exclaim over the loudspeaker, 'MD down!' In fairness to the mission directors, staying awake on night shift wasn't always easy. Needless to say, the coffee machine was a vital part of Operations.

As I believed the mission director position would take me away from where I was most useful, and where the action was, I decided not to accept a position where my primary responsibility would be to resolve the occasional emergency. This new role would have been a good career move, but in 2005 circumstances in my personal life had changed, significantly affecting my decision. I now believed I might leave the agency within a few years, so remaining on shift where I had more consecutive days off while earning extra pay was a renewed priority.

Overall, the highlight of my promotion to Grade 14 was meeting Lt Gen. Michael Hayden when he was asked to preside at the NSA promotion ceremony at Pine Gap. It was a great honour to receive my promotion certificate from the man himself. Early in the day I had had the privilege to brief him on some of our significant findings in Operations. Then, after the ceremonies, I attended an informal supper at the home of a colleague where the promotees and senior staff were invited to celebrate with Lt Gen. Hayden. I'm sure the locals of Alice Springs would have been surprised to learn that the director of the

National Security Agency was having supper in their small town that night! I brought several cigars with me to celebrate with friends, careful to blow the smoke away from the non-smoking director.

When I finished my cigar, I went over and had a more meaningful chat with Lt Gen. Hayden, who remembered my name, saying, 'Rosenberg, right?' I shared with him stories of my involvement with the local community through the Australia Day Council and Green Gates charities. He was surprised that I'd been in Alice Springs for fourteen years and asked how I had managed to stay at one facility for so long.

The following year, Pine Gap senior management chose me and one other NSA employee to attend a management development seminar in Denver, Colorado. This was a two-week immersive course in leadership skills that discussed and demonstrated networking and partnering, team building, creativity, innovation, relationship strategies, negotiating skills and building competencies. While taking the course, I was in my element as we performed role playing, contributed ideas and developed a team-based final presentation on leadership issues. As I was now just two promotions away from the senior executive service, the leaders at Pine Gap believed that I would move into a higher leadership position when I was scheduled to return to the United States, and this course was a required step in that direction.

In Alice Springs, time was marching on and 2007 marked the fortieth anniversary since the soil was turned for the construction of Pine Gap. The 40th Anniversary Pine Gap Ball was the largest held, with over 500 attendees. To celebrate the historic event, several special guests were flown in, including Chris Inglis, Deputy Director NSA; Robert McCallum, the United States Ambassador to Australia; a former chief, Barbara**;** two vice-presidents from a major Defense contractor: Chuck, the former contractor chief at Pine Gap; and Steven □□□□□□□ from Garland, Texas. I had already been in discussions with Chris Inglis regarding the possibilities of pursuing a position with the NSA in Canberra—my only other choice within Australia.

At the ball, I introduced myself to Ambassador McCallum, though not in the usual way. I was standing behind The Hon. Warren Snowdon, Federal Member for the Northern Territory (Lingiari), waiting to meet the ambassador. Warren eventually approached Ambassador McCallum and had a quick chat, shook his hand to say goodbye, then stepped backwards onto my right foot. Losing his balance, he jerked his neck backwards, forcing the back of his head into my nose. He went off-balance and was tipping over to the right when I grabbed his arms and helped him regain his footing. Warren slowly turned around, a big grin on his face, and apologised for

stepping on my foot. Ambassador McCallum watched all of this, thought it was quite funny and greeted me with a smile. We spoke for a short time and he too appeared genuinely impressed that I'd been able to serve at Pine Gap for seventeen years, asking how I had managed to extend my tour. Aware of the growing line behind me I simply replied, 'The power of persuasion sir.' He laughed and we shook hands as I left.

The Bush years were a challenge in many respects, mainly due to the conflicts involving the United States that required a significant number of collection resources at a time when manning levels weren't always sufficient. It was difficult to entice government civilians with children to move halfway around the world after they had heard of the reduction in benefits that had occurred over the years. Most were unwilling to uproot their families, change schools and accept a remote assignment in Central Australia if the perceived benefits didn't significantly outweigh the costs. The benefits for a government civilian employee with no family concerns were quite good, however: I received approximately US$50,000 more per year when I resigned than I would have received in Maryland (my gross federal earnings when I resigned slightly exceeded the annual base salary of a US senator and representative[2]). However, with some families, removing children from familiar surroundings and taking them away from their family and friends was often not worth the extra pay the parents (or parent) would have received.

While work continued to be rewarding for me in many ways, my personal life during the Bush presidency had once again undergone some traumatic upheavals. My Australian wife and I no longer enjoyed a good relationship, and although I loved being stepfather to my stepson, after seven years of marriage, my wife and I decided to separate, divorcing two years later in 2004. It was easy to say we were simply two personalities who didn't complement each other, and after we separated, I felt I needed some time to myself to reflect on why I had two failed marriages, and to learn how I could improve the quality of my relationships. I had no desire to date anyone when we separated, but about six months later my personal life, along with my career, changed direction in a way that I could never have imagined.

PART III:

GETTING A ROUND

9: NO TOWN LIKE ALICE

The Henley-on-Todd bathtub derby

Narrowing the gap between the American and Australian cultures occurred within and outside of work, and while the shift work at Pine Gap often sapped one's energy, there was no better place to unwind

and enjoy a relaxed atmosphere than 'a town like Alice'. Alice Springs is called home by people from many cultures and for a town with a population of only 28,000,[1] this diversity can be found in the various places of worship, sporting activities, arts, cultural events, and the variety of cuisine—there's even a Swiss–Indian restaurant.[2] The American population is probably the largest presence in Alice Springs following Australians of European descent and the local Aboriginals. The American way of life can easily be observed through the large number of left-hand-drive cars, participation in softball and baseball leagues by many locals, several American chain restaurants, and the American-style food that is available in local supermarkets. For more than forty years, the Americans and Australians in Alice Springs have shared their cultures, including joint celebrations of national holidays such as Australia Day and the Fourth of July. While the Yanks learned cricket, rugby and netball, many became even more Aussie-like by becoming experts at the traditional Australian three B's: barbecues, boomerangs and brewing beer.

The Americans could be relied upon to participate in local activities such as the Bangtail Muster, the Camel Cup, the Finke Desert Race, the Masters Games, and the annual Henley-on-Todd Regatta.[3] When I first heard about the Henley-on-Todd, I couldn't imagine a regatta in the dry Todd River bed, but the people of Alice Springs can be quite creative! Bottomless boat races, the Bathtub Derby and the Battle Boat Spectacular are absurdly silly events that are always fun to watch with a beer in hand. The American military were particularly keen to show off their physical prowess by participating in many of these events.

The sporting life in Alice Springs provided me with the opportunity to make friends with some of the locals who didn't work at the Base, and as a certified personal trainer, I was addicted to keeping fit and couldn't wait to spend time outdoors. With the large American population, a gridiron team—the Alice Springs Redbacks—was formed in the mid-1990s. While the Aussies caught on quickly to the finer points of gridiron, the Yanks participated in various forms of rugby as well as indoor and outdoor cricket (the latter bearing some similarities to American baseball, though I know most of my Aussie friends vehemently would disagree with this).

I also joined a softball team in a league that had two rules: you always took a tinnie with you when you were fielding, and if a batter hit the ball and the ball knocked over a beer, the batter was out. Hence the name: Alice Springs Beer League Softball. It was certainly different to playing softball back home!

For families, sporting events involving their children's teams were a great way to meet new people and integrate into the local

community. Children were encouraged to participate in some form of organised sport as these activities were heavily supported by the Alice Springs Town Council. It was quite common to see American children in primary and secondary school playing a sport that they had never heard of back home such as cricket, rugby or netball. Most of the American children found it easy to make new friends and typically thrived in the school system.

Another benefit for new arrivals was the education subsidy for American children, with almost 100 per cent of education expenses paid by the United States Government. Thus, American children could afford to attend the best of the five high schools that Alice Springs had to offer, which included three public high schools and two Catholic private schools. As the Catholic private schools didn't exclude non-Catholics, many American children received a private education that would have been financially prohibitive in the United States.

A rich, cultural aspect of my new home was living in a town with a large Aboriginal population, consisting primarily of the Arrernte people, whose name for Alice Springs is Mparntwe. Of the approximately 18,000 people living in Alice when I first arrived, about 3100 were Aboriginal. The Aboriginal culture is reflected in the abundant artwork and artefacts visible and available everywhere in Alice Springs such as boomerangs, dot paintings, pottery and didgeridoos. Tourists can visit sacred sites and be taken 'out bush' to learn about the land and feast on traditional Aboriginal 'bush tucker' delicacies such as witchetty grubs and honey ants.

For me, learning about Aboriginal culture was a novel experience. I met many Aboriginals and people of mixed blood in various businesses and as guides or caretakers at the various tourist sites in and around Alice Springs. I also learnt more about the Australian Dreamtime through stories that explain the natural world and how people came to live in it. One of the local Dreamtime legends in Alice Springs relates the story of the caterpillar beings who are said to have formed Emily Gap and much of the landscape around Alice Springs. An ancient rock painting of the caterpillars can still be seen at Emily Gap, which became a very special place for me. In 2004 I commissioned a local friend and very talented artist, Craig Saunders, to paint what became an incredibly beautiful painting of this unique place. To an American this was all a fascinating history, and I found the local Aboriginal people very friendly and helpful. The many and varied Aboriginal paintings found in my home serve as fond memories of my time in the Alice.

One of my African-American friends from the United States Army enjoyed spending time with the Aboriginal people and told me how he learned about 'skin names'. He told me the Aboriginals use skin names

to help identify who one could marry to prevent such things as inbreeding, explaining that skin names are like family surnames that are further broken down into male and female designations. As he learned more about the Aboriginal culture, a friend of his from the Arrernte people presented him with a dot painting that depicted my friend's life story based on the information he'd provided. These sincere friendships continued to play a vital part in 'narrowing the gap' between the local Aboriginal and Pine Gap communities.

While most people in Alice Springs live in harmony, it was clear that there were still some racial divisions. After Darwin, Alice Springs has the second-highest crime per capita of any Australian city.[4] The high crime rate among both Aboriginal and non-Aboriginal populations consists largely of domestic violence, daily vandalism to businesses, graffiti, and a relatively high murder rate for such a small population. Truancy and alcohol are major problems and while there is no clear solution to either of these, education seems to be the key to breaking the cycle for future generations.

Central Australia offers a variety of different landscapes, and as a new arrival to Alice Springs one of my early trips was to Australia's best-known opal fields in Coober Pedy, South Australia. When I saw how diverse opals were, they became my favourite gemstone. Of all the places I have visited, Coober Pedy has to be the most unique. Before my friends and I arrived at the centre of this very small town, we began to see small dirt mounds formed from mine shafts. As we got closer to town, more mounds appeared, until we eventually saw hundreds of mounds in every direction. I then saw one of the strangest warning signs I had ever seen—it was a sign of a person walking backwards with a diagonal line through the centre. The warning was clear: if you walked backwards, you were likely to step into an opal mine shaft. Point taken! It was a memorable trip, and I remember a sobering talk with my friends about how easy it would be to fall into one of those mine shafts. This, coupled with a prevalence of potentially deadly snakes such as the brown, king brown and death adder, meant that Central Australia could be a very dangerous place.

It wasn't just the piles of dirt and shafts everywhere that made Coober Pedy unique. The weather is inhumanely hot and dry in summer, with rainfall considered to be a rare event, forcing many residents to live underground where the temperature can be more easily regulated. Some underground residents continue to dig horizontally, creating a new room while finding enough opal to pay for the furnishings. Coober Pedy also boasts an underground Anglican house of worship, 'The Catacomb Church', which caters to around six Protestant denominations. My friends and I went to some excavated opal dirt piles and did some 'noodling' for opals—searching through

the piles of dirt for some overlooked precious white and crystal opal. Although we did find small amounts, we went back into town and bought some uncut stones. We took them back to the lapidary shop at Pine Gap, where we were able use the equipment to cut and polish almost every type of precious stone found in Australia. (The lapidary shop at Pine Gap was used by many of the Americans who discovered the wide array of gems that can be found in different parts of the rich Australian outback.)

I would later drive out to the amethyst fields near Glen Helen Gorge and the garnet fields at Gemtree hoping to find those semiprecious stones as well.

Travel was a significant part of the lifestyle in Alice Springs, and I visited Adelaide and Cairns with friends, finally experiencing the beauty of one of the world's natural wonders, the Great Barrier Reef. My thirst for travel grew while I was in the confines of Alice Springs and I eventually visited Bali and most of the Australian capital cities. The opportunity for regular travel in this part of the world was simply not possible when I worked in Maryland, so I took advantage of my time in Australia to discover and learn more about this vast country.

I also found several places to abseil with a good mate who was with the Australian Protective Service, the government department that provided security to the perimeter around Pine Gap. I also purchased my first motorcycle, a small Suzuki 250, and explored the open off-road spaces around Alice Springs while discovering that the limitless outback proved to be the perfect setting for learning how to ride. I wasn't the only one who appreciated the hot weather combined with no speed limit: it was also attractive to the Chevrolet company, who typically shipped the newest model Corvette to Alice Springs for hot-weather, high-speed testing. Once every year it was a common sight to see a lucky driver behind the wheel of a new left-hand-drive Corvette, motoring around Alice Springs with the hood covered in a 'car bra' so as not to reveal the details of the new-look Corvette.

The senior leadership at Pine Gap could typically rely on the Americans to blend in and make a positive contribution to the community, but occasionally someone managed to get into some kind of trouble. When this occurred, he or she would often be forced to pack that night and take the first flight home to face disciplinary action.

Early into the new millennium, an incident in the Aces Bar at Lasseters caused one contractor to be forced to return home. One night, he and some friends were socialising with some local women. The conversation eventually focused on the Australian women's opinion that all American men wear Y-front underwear, and it was

always white. With a few drinks under his belt, this individual volunteered to prove the Aussie women wrong. 'My underwear's not white,' he said. 'It's blue with grey checks; and I'm wearing a thong.' He then dropped his trousers to prove his point. With the casino's security cameras still rolling, he was quickly escorted off the premises. When he attempted to re-enter the bar to retrieve his cigarettes and was refused entry, he hit the security guard, which was also captured on film.

Needless to say, the incident was soon reported to Security at Pine Gap and he was told he had to leave Alice Springs. He took the news as well as could be expected, even laughing about the underwear story with his manager. He survived this incident, managed to retain his security clearance, and continues a successful career with the same contractor at another overseas posting. After almost forty years, Harry's first rule about not tolerating unacceptable behaviour was still, I'm glad to say, firmly in place.

In another case at Lasseters, an American soldier was trying his luck at blackjack when he thought he might also get lucky with the ladies by divulging some of the secret work that was done at Pine Gap. This went on for several minutes until other Pine Gap employees around him hushed him up, but word of his 'impressive' discussion of classified information made its way back to Security. His military career was put on hold and he was immediately sent back to the United States to face disciplinary action. On this occasion, his luck had run out.

In yet another incident, a rather well-endowed American female soldier ran into some big trouble when she entered a wet t-shirt contest and went a bit too far in revealing her assets, which were captured on camera. The photos later appeared in a popular men's magazine that somehow found its way to the mission director's desk. She was given a verbal reprimand, but her photo had become so popular in Operations that she was asked to sign several issues of the magazine for her admiring fans, which included at least one mission director. Other similar incidents continued to occur, with almost all of them displaying one common factor—alcohol was usually responsible for loosening tongues at the wrong time and contributing to the inappropriate behaviour of security-cleared personnel. No doubt this is the bane of secret services/the intelligence community everywhere, and has been throughout the ages.

Like most towns, Alice Springs has many generous citizens who devote much of their time to some form of community service. After four years in Alice Springs, my social network grew rapidly when I joined the Alice Springs Australia Day Council (ADC). The United States Government encouraged all Americans to become involved in

the town by joining local community service groups and charities. I was one of several Americans on the ADC, which was a charity that raised funds to purchase books for schools. I helped raise money through sausage sizzles, trivia contests, the annual fundraising ball, and strutting down the catwalk at two fashion shows. Through the ADC I became friends with several local Australians and business leaders. I eventually served on the ADC for eight years, making lifelong friends and becoming the elected vice-chairman, MC-ing the annual Australia Day Ball four times. I don't think any of the Australians who were there expected to hear a Yank hosting the Australia Day Ball! As if this wasn't enough, the Americans were so well integrated into the ADC that a good American army friend of mine who had sung backup for Barry Manilow led the audience in singing the Australian national anthem at two Australia Day Balls.

The ADC proved to be an effective way to meet with some of the most interesting and influential Australians when they visited Alice Springs. One of the highlights of my time on the ADC occurred in 2001 when I met Australian Lt Gen. Peter Cosgrove, Chief of Army, after he had been voted Australian of the Year and the ADC held a luncheon in his honour. I also had the privilege to meet with Bryan Gaensler, the astronomer and physicist who received 1999's Young Australian of the Year award. He toured Alice Springs discussing his discoveries involving the alignment of supernova remnants within the Milky Way. In 2005, the Senior Australian of the Year, Antonio (Tony) Milhinhos, came to my home for a coffee over which we spoke about his philanthropic work. It was inspiring and rewarding to meet with many Australians who made an impact on so many people. I personally worked with and became good friends with a fellow Alice Springs ADC member, Mister Shaun (coincidentally born on Australia Day), who received the 1999 Young Centralian of the Year award. He was one of the most community-spirited individuals I had met and was devoted to improving the lives of many less-fortunate and disadvantaged people in Central Australia through his work with the Ngaanyatjarra Council as its Community Development Employment Program (CDEP) Coordinator. In Alice Springs, he was the state vice-president for the Northern Territory / South Australia community organisation Apex. He was also a stand-up comedian and hosted several children's television shows on the Aboriginal television station, Imparja. A truly unique and talented individual, he changed his name to Mister Shaun (aka Shaun Rothwell) by deed-poll, convincing the authorities to allow him to do this after being told he could not legally change his name to a title. Unfortunately, he died tragically in 2011, his potential unfulfilled, leaving a void in the hearts of many who loved him and those who benefited from his community service.

After eight years on the Alice Springs ADC, including three years as vice-chairman, I resigned, believing it was someone else's turn, and instead volunteered to be on the Green Gates drug rehabilitation charity. I was soon elected chairman of the Fundraising Committee, serving in that role from 2002 to 2006. Two of the most popular fundraising events in Alice Springs were the Green Gates Christmas in July Ball and the Robbie Burns Ball. Burns was the Scottish poet famous for writing 'Auld Lang Syne'. Alice Springs has a surprisingly large Scottish population, but the non-Scottish residents of Alice Springs also looked forward to the bagpipes, Highland dancing, and the rare opportunities to wear a kilt and eat a serving of haggis! I served on these two charities as the local American spokesperson for twelve years, MC-ing at least ten fundraising balls.

I found the charity work to be one of my most rewarding experiences while I was posted to Alice Springs as I was able to witness how community service helped those in my community, and how the active participation of the Americans from Pine Gap in local sports, community events and charitable work proved to be an effective way of bringing the Australian and American cultures together.

Outside of the ADC and Green Gates, social life for me in Alice Springs was typically very casual and laid-back. Owning a barbecue was practically de rigueur for everyone, and having friends over for a snag, a steak and a beer or two were daily occurrences for both Aussies and Yanks.

Within many American families, both husband and wife held security clearances, allowing both of them to work at the Base, which I thought was healthy for those who wanted to talk and debrief about work-related issues. In the eighteen years I was in Alice Springs I had observed that the strain of living in a small town with limited social activities was a factor in many failed marriages. With just one cinema, one bowling alley and not many more restaurants, the choices in Alice Springs soon became repetitive and new arrivals needed to make friends and participate in some of the local sports to help fill in their social calendar. Unfortunately, many marriages didn't survive because of affairs within the Pine Gap community. The pressures of shift-work were often cited as a reason for many breakups. I knew of several married shift workers who had an affair with someone they worked with on shift. With the opportunity for close contact at work and with someone on crew always organising an after-work party or other crew event, many seemingly good marriages collapsed as new couples appeared. Although shift work provided additional income, the extended work hours meant that a married couple might cross each other's path for only two hours per day over a four-day period. To

survive as a couple in Alice Springs, your relationship needed a very solid foundation of trust and good communication.

While most employees at Pine Gap were married, there was still a large singles population, especially among the military. All in all, the singles found it easy to meet other singles. Some local women particularly wanted to pair up with American men as they liked the idea of having a 'spy' as a boyfriend, and it was common to see singles with more than one new 'love' interest each week.

For the American singles living in Alice Springs, the nightlife was very limited compared with that in the bigger cities back home. When I arrived, there were only three 'nightclubs': Trump's at Lasseters, the Simpson's Gap Bar at the Sheraton (also known as the 'Sticky Gap Bar' because your feet stuck remarkably well to the floor) and Melanka's Party Bar. There were also several great pubs, including Bojangles Saloon, easily the most popular bar in Alice, with live music, cowboy boots nailed to the ceiling and a resident python. Bojangles also stocked an amazing variety of beers and served some of the best food in town including a sampler platter with crocodile, emu, kangaroo, buffalo, and camel.

Scotty's Tavern on the Todd Mall was very popular among the locals and Americans for its live music and for staying open until the wee hours. The eponymous Scotty is the son of Reg Harris, and he eventually became a very good friend of mine. The walls at Scotty's were covered in old photographs of Alice Springs, providing a pictorial history of the town. Sculpture featuring prominent Territorians by artist Bardius Goldberg adorned the bar, adding to the historic atmosphere. Ted Egan, the well-known entertainer who would later become the eighteenth administrator of the Northern Territory, was often found at Scotty's, this being one of his favourite watering holes. Unfortunately, Scotty's Tavern closed twelve years after I arrived. The Goldberg sculpture can now be found at the Cavenagh Lodge B&B, located next door to the original chief's residence on Cavenagh Crescent.

For those 'suffering' from life in a small town, a somewhat secret community within the already 'hush-hush' Pine Gap population began to branch out just after 2000, coinciding with the arrival of a new coworker from the United States Army. He and his wife were 'swingers', and soon after their arrival, a new club in Alice Springs was born. The Swingers Club found it easy to recruit members, and rumours of wild parties with 'naked trampolining' began to circulate. For those who were previously bored with activities on offer in Alice Springs, the boredom meter had 'swung' and was now pointing in the opposite direction. People in the club would come and go, and new recruits would always be found, often during the weekend when the

alcohol was flowing. It was rumoured the club contributed to at least one Pine Gap couple's divorce. I wondered whether the Americans were submitting their mandatory Foreign Contact forms to Security for investigation after a particularly wild weekend. Or perhaps protocols weren't followed—did Security even know about the club?

Sex was certainly a big part of the Alice Springs culture, and I remember that legal escort services had operated in town when I arrived in 1990. Australian government employees weren't immune to sexual temptation either, with Defence Signals Directorate reported to have 'been rocked by rumours of sexual misconduct' in the past,[5] including participation by employees referred to as the 'royal family'[6]—family members who tend to achieve promotions rapidly within the organisation. It was possible that members of this noble and willing 'family' passed through Alice Springs and may have been active participants in the various sexual 'goings-on' between consenting adults that had become somewhat widespread in the Alice Springs Swingers Club.

10: PROTESTS AND ALIENS

Pine Gap protestors make the news in 1983

Pine Gap has been the target of many organised protests by demonstrators who wish to see the facility shut down and permanently closed. Their reasons are many and range from the

argument that Pine Gap is a nuclear target to accusations that Pine Gap is responsible for the bombing and killing of innocent civilians. The protests have ranged in size from four individuals who, without authorisation, successfully entered the facility in December 2005[1] to approximately 700 who staged a two-week protest that began on 11 November 1983.[2] I have also seen single protesters in the Alice Springs Todd Mall shopping area, sitting behind a desk surrounded by signs that read 'Pine Gap kills babies'. Pine Gap protesters have historically used these sensationalist tactics to draw attention to their cause, no matter how inaccurate I know their information to be. I know for a fact that Pine Gap does not kill babies or civilians as Pine Gap isn't capable of initiating either the launch or activation of any weapons.

Among the many demonstrations held outside the Pine Gap security gates, a protest in 1983 was the largest, reportedly led by Aboriginal women, and comprised mainly of women under the auspices of 'Women for survival'.[3] This protest was non-violent but many women entered the grounds illegally, resulting in the arrest on 13 November of 111 women,[4] all of whom gave their names as Karen Silkwood, the American labour union activist and anti-nuclear campaigner.[5] That day was the anniversary of Karen Silkwood's death.

On 1 September 2009, a Remembering Pine Gap exhibition of photos, posters, banners and memorabilia from the archives of the Jessie Street National Women's Library was held at Parliament House in Sydney to commemorate this protest.[6] I was curious about what these women had to say about Pine Gap twenty-six years later, so attended the opening of the show. I was surprised to hear several misconceptions about Pine Gap promulgated by various speakers as they related their experience from 1983 and their personal feelings about the Base today. As they told how Pine Gap was responsible for killing civilians in Iraq and Afghanistan, each speaker referred to Pine Gap by its former name, the Joint Defence Space Research Facility, a name that hadn't been used since the late 1980s. They stated that the United States Government still does not allow Australians access to the Operations floor and that Australians are not allowed access to all of the information within Operations. As a United States Government employee working within Operations for eighteen years, and now as an Australian citizen, I know this to be patently false.

The perpetual arguments about Pine Gap directing the killing of innocent civilians persist to this day, but it was the erroneous information discussed at the exhibition opening that reinforced my belief that it was the right time to set the record straight on the primary role Pine Gap plays, and has played, in Australian and

American defence matters. I didn't reveal my former association with Pine Gap to anyone at the opening as I didn't feel my presence would be welcome. Despite this, the exhibition and discussions were interesting and helped those of us in attendance understand the thoughts and motives of those who participated in the protest. As an aspect of Australian women's history, the event was a success.

Another protest against Pine Gap had occurred in July 1985 when activists on bicycles entered the Alice Springs airport illegally in response to Pine Gap's alleged support of President Reagan's 'Star Wars' missile defence program.[7] The protest involved cyclists riding their bicycles onto the tarmac as a very large Galaxy aircraft prepared to land. The Galaxy provided equipment and material to Pine Gap. With 'human shields' blocking the landing strip, the Galaxy was forced to abort its first landing until the cyclists were apprehended. Eventually, the Galaxy landed safely. However, while the aircraft was preparing to unload, a man ran onto the tarmac and sprayed the side of the aircraft with red paint.[8] News and photos of the 'Galaxy versus bicycles' battle soon appeared in newspapers around the world. This isn't exactly what one could expect in a *Mission: Impossible* movie!

In October 2002, with rumours of an impending war in Iraq being voiced by the Bush administration, a large 'Expose Pine Gap' march consisting of more than 500 people, including some politicians, was planned for the weekend of 5 to 7 October.[9] The protest was mostly peaceful, with only a few arrested for minor infractions such as trespassing.

Then for several years all was quiet on the protest front—until, on 9 December 2005, while I was at work inside the secure building, we went into lockdown for several hours as the most serious security breach in Pine Gap's history took place: four protesters successfully entered through the outer perimeter fence of the facility and several layers of security within the grounds. Two of them proceeded to climb on top of one of the inner buildings, where they took photos and placed anti–Pine Gap leaflets on the roof.[10] Although their actions were slightly malicious and damaged some of the security fence, they were peaceful and certainly didn't intend to harm anyone inside the facility. But with terrorism a very real threat to America and Australia, they gambled with their lives—the security officers couldn't have known their exact intentions. But, luckily, all four were soon apprehended and arrested by the cool-headed officers.

There had been security breaches in the past, but until then no-one had successfully managed to scale any building within the inner fence. Initially we didn't know the extent of the breach, but we soon found out that trespassers had been arrested. As expected, security at the Base was tightened overnight.

The Pine Gap Four, as the protesters became known, were tried and found guilty of breaching the *Defence (Special Undertakings) Act 1952* and fined. They weren't sentenced to jail, and they successfully appealed their conviction in 2008, but convictions for trespass and criminal damage remained.[11]

Following their successful appeal, the four appeared outside court, holding banners that read 'Pine Gap Terror Base' and 'Civilians Bombed While U Wait'.[12] Clearly there was still much misinformation about Pine Gap among the general population; Pine Gap neither commits nor participates in terrorist acts, and it has never bombed civilians. I wouldn't have worked there if it had been the case. Pine Gap cannot 'push a button' that could kill innocent people, nor has it ever directed anyone else to do so. On the contrary, Pine Gap has made countless contributions to saving the lives of soldiers in combat situations, and I will always feel proud that I was a part of the mission to do this for eighteen years.

There have been large and small protests throughout the years, but none has achieved the goal of closing Pine Gap. A common argument used by protesters to justify closing the Base has been that it is a nuclear target, with many reasoning that if a nuclear-armed nation became involved in a 'hot war' with Australia or the United States, it's possible that the enemy country would drop a nuclear bomb on Pine Gap to prevent the facility from operating during the conflict. However, the terrible consequences of the use of nuclear weapons have reduced them to a desperate, last-resort option for any government. An overt missile launch of a nuclear weapon against Pine Gap would be achievable only by a limited number of governments, and in any case the origin of the missile would be accurately determined. As a powerful disincentive to deployment, this type of attack against Pine Gap would most certainly be met with similar or more powerful weapons from the United States. In the interests of all parties, any conflict between nations is far more likely to be resolved diplomatically or through the use of conventional weapons before the nuclear option is chosen, as has been done since World War II.

In today's world, terrorism from stateless organisations represents an ongoing threat to the safety of civilian and military populations. The 9/11 terrorist attacks greatly exposed the susceptibility among the general population to these types of attacks, any of which could have included a radioactive component. Since 9/11, the intelligence community has been widely reported to utilise many assets in the fight against terrorism.

compelling reasons for allowing Pine Gap to remain. The argument to

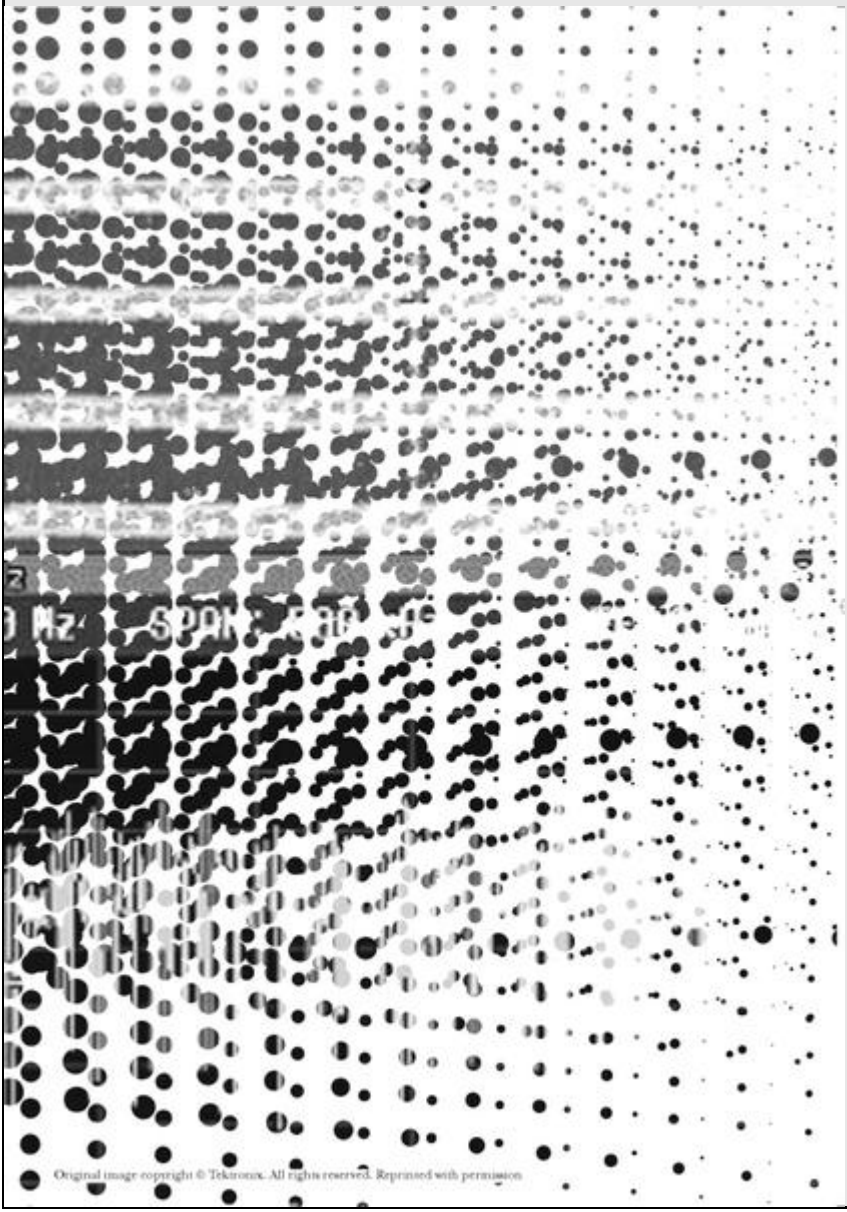
continue the presence of Pine Gap is also echoed in many of Professor Ball's writings and in his testimony to the Australian Senate in support of renewing the lease for the continuation of Pine Gap.

□□□

Despite the countless stories involving UFOs and Pine Gap offered up by the internet, the aliens must have kept a very low profile during my eighteen-year tenure in Operations, as I, like the unlucky Wycliffe Well tourist, never saw any evidence of aliens at or around Pine Gap.

PART IV:

GETTING OUT



11: THE SINGER AND THE SPY

The singer and the spy marry, Pearl Beach

In early 2002, I resigned as vice-chairman of the Australia Day Council to become chairman of the fundraising committee for the fledgling Green Gates drug rehabilitation charity. That year, Green

Gates decided to hold a Christmas in July Ball at the new Alice Springs Convention Centre. A band from Sydney was recommended by the events manager, who had seen the group perform at an Alice Springs film set. The brochure for The Siren Singing Sensations featured a blonde, a brunette and a redhead, all dressed in colourful costumes which I later discovered had been designed by the Sydney Theatre Company. They appeared to be a high-class act, so I made a phone call to the blonde, LouLou (or Lou), in Sydney and booked the band. Little did I know that I had just spoken to my future wife!

A few months later, The Sirens arrived in Alice Springs. I first met Lou in the ballroom as she and the group prepared to do their sound check. When I heard Lou's strong, deep singing voice booming around the room, I knew we had booked the right act. Later that night, The Sirens performed flawlessly and the ball was a huge success, raising much-needed funds for Green Gates.

After the ball, my friends and I went to the casino's Irish pub, Limericks, where we met Lou and her fellow Siren Mandy for drinks. We thanked them for their performance and had a good time getting to know them as we talked and danced into the early hours. As I was recently separated and emotionally unavailable, I didn't want to get involved with anyone at that time, so a night of dancing and drinks was all I had in mind. As we all said goodnight, I didn't imagine that our paths would ever cross again.

But fate intervened. Our treasurer had forgotten to pay the band and it was up to me to contact Lou in Sydney to apologise. The lines of communication were reopened and The Sirens were paid. The following year I contacted Lou before arriving in Sydney on my way to the United States and caught up with her for a drink. We hit it off immediately. Lou was fun, easygoing and intelligent. I was strongly attracted to her and wanted to see her again but when I mentioned the possibility, she replied that there wasn't much point since I lived in Alice Springs and she shared custody of her son with his father in Sydney, so Sydney would always be her home.

We made arrangements to see each other again, and then again. One day, when we finally spoke about the depressing reality of our geographical separation, I simply looked Lou in the eyes and said, 'I will make it work.' And so Lou and I began a long-distance love affair that thrived in spite of the considerable kilometres between us. For more than five years, each month one of us made the three-hour flight between Alice Springs and Sydney, visiting for a weekend or a couple of weeks when time allowed—becoming two of Qantas's best customers. As our relationship developed, our deepening love and commitment proved to be stronger than the great distance between us.

My new relationship meant that I was required to complete the

Foreign Contact form for Security as I was still 'owned by the agency' as far as my personal life was concerned. In late 2005 I knew I had found the person I wanted to always be with and decided I wanted to marry Lou. Security then provided a massive amount of paperwork as a more extensive investigation needed to be completed on Lou and her family (as was done for my previous marriage). I didn't want to alert Lou that I was planning to propose, so I just told her that I needed more information for ongoing investigations because we had been in a relationship for some time and Lou wasn't a US citizen. This latest investigation reassured Security that Lou—a born-and-bred Australian with a stable job working with autistic children as a registered music therapist—was neither a security risk nor an agent committing espionage for a foreign government.

Lou remained unaware of my plans until I proposed about seven months later, proving I was worthy of the security clearance that said I was able to keep quiet and not reveal the most important secrets! I later learned that Lou thought I would never propose, believing that my previous relationships had left me with a negative and bitter view of marriage. She was surprised and thrilled when I proposed to her at our special meeting place, Emily Gap in Alice Springs.

Traditionally, prospective grooms ask the young lady's father for permission to marry. As a security-cleared employee seeking to marry a non-US citizen, I had to channel my request in a somewhat different direction. Instead of asking Brian, Lou's father, I was required to ask, and subsequently received written permission from, NSA's Office of Security. During a previous visit to Sydney in late 2004 I had a private talk with Brian, who was sick with cancer at the time. He told me how happy Lou was whenever we were together, and said he would like to see us marry. 'Just marry her,' he said! With blessings from Brian and Security, I was now ready to marry my Australian bride-to-be, which I did in November 2006, our homes still separated by the vast outback. Sadly, Brian died several months after we had our private talk and wasn't able to attend our wedding. (I think of him fondly every time I see his legacy in downtown Sydney: Brian was in the glass business, and he manufactured and installed the stained-glass dome in the Queen Victoria Building.)

Lou's friends and family had dubbed us early on as 'The Singer and the Spy'—before becoming a music therapist Lou had been a professional singer for more than two decades, appearing as the headline singer at the Long Bar in Singapore's Raffles Hotel, the Lyric Theatre in Hong Kong and Sydney's premier music club, The Basement, to name just a few venues. She had also sung and become close friends with the legendary 1970s funk guitarist O'Donel Levy, often seen riding on the back of his motorcycle in Singapore, and as a

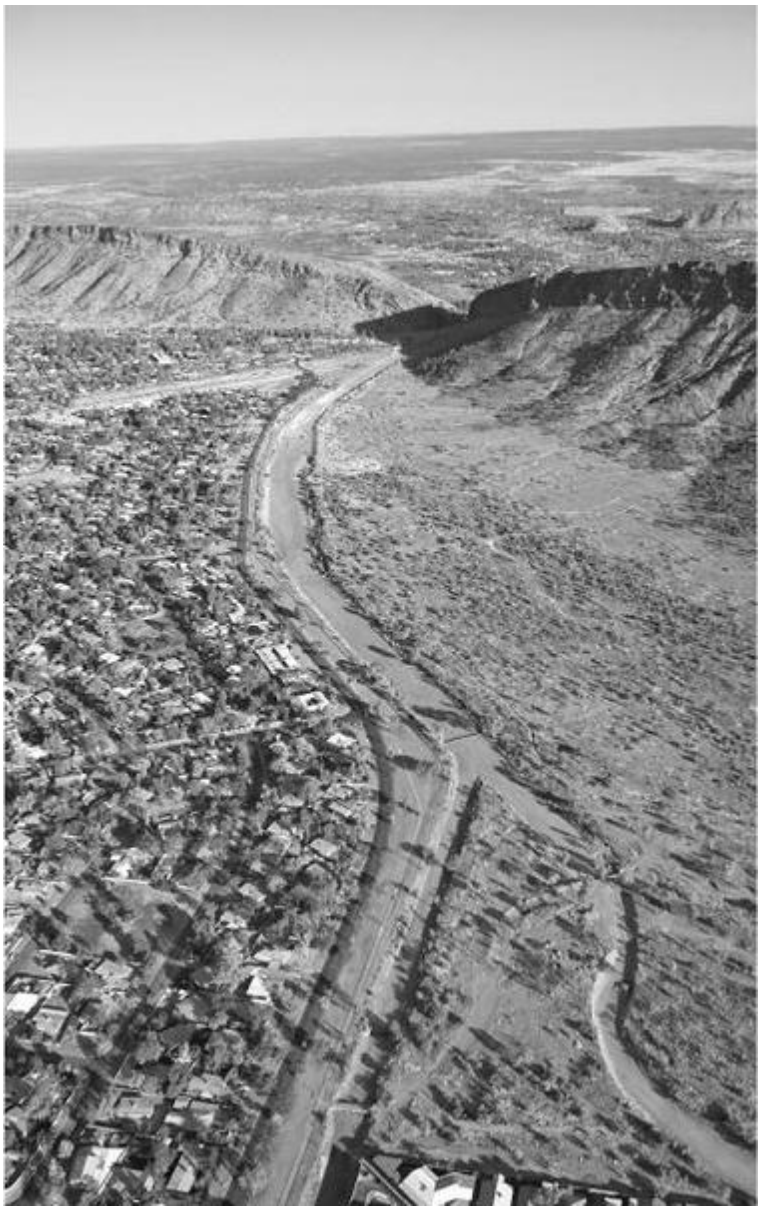
session singer, her voice could be heard on many television and radio commercials. As a wedding present she sang to me, and our guests, the aptly titled song ‘At last’.

Our planned honeymoon in Fiji had been booked and paid for and in spite of rumours of an impending military coup we decided to stick to our plans and head to the islands. Since many tourists were staying away from Fiji, our first five nights on Tokoriki Island were quiet and relaxing as we enjoyed the Fijian people, the fine food, the beaches and snorkelling. Our next stop was the exclusive resort of Namale, owned by the well-known motivational speaker Anthony Robbins and managed by a friendly Australian couple. We stayed at the very exclusive Rosi Villa and were told that Ben Affleck had stayed there just before our arrival. As we were leaving, I found a high-quality Italian-made black shirt left on top of our wardrobe. It was a perfect fit and I silently thanked Ben for the honeymoon gift.

Talk of a coup had been rumoured for months, with nine demands by Commodore Josaia Voreqe ‘Frank’ Bainimarama imposed upon the prime minister, Laisenia Qarase.[1] But as we had spent two idyllic, sunny days swimming and drinking Veuve Clicquot champagne, any thoughts of an impending coup seemed millions of miles away. The deadline for the demands to be met was 1 December, but in true Fijian fashion the plotters delayed the coup until 3 December to accommodate the annual rugby union game played between the National Police and the military.[2] As we were having breakfast at Namale on 4 December, we observed several Fijians huddled around a radio listening to news of the coup, which had just occurred. After breakfast, I received a phone call from Security at Pine Gap asking if we were in any danger. I assured Security that we were safe and nowhere near the capital of Suva. I was certain that an emergency rescue by military helicopter wouldn’t be necessary, so Lou and I continued to relax, drinking Veuve in paradise.

We could not have honeymooned in a more peaceful place. The people of Fiji were among the friendliest we had ever met, with constant greetings of ‘Bula’ heard from passers-by. ‘If only more military coups could be modelled on Fiji’s,’ I perversely thought when we had no problem getting out of Fiji in time to return home.

12: TIME TO LEAVE



Alice, from afar

Although my employment prospects in Sydney weren't good, as I couldn't discuss the classified details of my work at Pine Gap with potential employers and my network in Defence was primarily in

Canberra, Lou and I decided that living together as a family was more important than my future with the United States Government.

My final three-year tour at Pine Gap was scheduled to end on 5 August 2008 but I requested a two-month extension to 5 October because I wanted to complete my supervising role with a new trainee and end my tour on the anniversary of my arrival at Pine Gap. It also seemed a fitting way to wrap up my career.

We decided that I would try to find a position with the NSA in Canberra, three hours' drive from Sydney, as it was known that the NSA had an office there.[1] Lou shared custody of her son and couldn't bring him to live in Alice Springs, so I was going to be the one to move. But unfortunately NSA positions in the Australian capital are relatively rare, and although highly qualified for two positions I applied for, I was unsuccessful.

When I resigned, approximately 40 per cent of the NSA workforce had only five years' experience or less, but my twenty-three years with the agency, as well as my qualifications, training and established network within Australia, were simply not enough of a supporting argument to secure a continuing position with the agency. One problem was that the leadership in Maryland who selected the candidates had their favourites and hadn't met with me. I had been away for a very long time and I didn't communicate with those at Ft Meade who were responsible for placing an individual into sensitive liaison positions. Although I had established an excellent working relationship with more than fifty Australians in the Canberra office where I would be assigned, I was a wildcard candidate to my management in the United States. I had found that working at Pine Gap was equivalent to serving 'out of sight, out of mind' to many in the leadership chain in my parent office at Ft Meade, regardless of my accomplishments and reputation in the field.

Although I had over twenty years of experience and an ability to provide solutions to the diverse intelligence requirements demanded in my profession, I wasn't able to continue using my experience with the NSA. The effect of this type of loss was summed up succinctly in relation to the CIA's own workforce:

> By the CIA's own standards, roughly half its workforce were still trainees. Few were ready and able to produce results. But there was nothing to be done about it; the CIA had no choice but to promote them beyond their levels of ability. As youngsters in their 20s replaced people in their 40s and 50s, the result was an abridgment of intelligence. The clandestine service began to abandon the techniques of the past—political warfare, propaganda, and covert action—

because it lacked the skills to conduct them.[2]

In 2007, over a year before I resigned, I asked the American security office at Pine Gap and the NSA if I could become an Australian resident by applying for an Australian spousal visa in the event I wasn't selected for an NSA position in Canberra. I wanted to be eligible to live and work in Australia if I voluntarily resigned in 2008. Security told me, however, that if I applied for Australian residency via a spousal visa, I would show a 'foreign preference' and I would likely lose my clearance and my job. They stated that applying for Australian residency 'would be inconsistent with my eligibility to hold a United States security clearance'.

I was surprised at this response as Australia was a close ally, and Security made it sound like I was applying for residency in Iran or North Korea. They cited a regulation found in the 'Director of Central Intelligence Directives 6/4 (DCID 6/4), Annex C, Guideline C: Foreign Preference', which said that if I sought '(4) residence in a foreign country to meet citizenship requirements', I may 'be prone to provide information or make decisions that are harmful to the interests of the United States'.[3] At the time I wasn't planning to obtain citizenship, so I explained to Security that I was simply applying for residency in case I later resigned, as I would need residency to enable me to live and work in Australia. Sadly, Security refused to listen to my case. They were determined to make my transition from agency employee to Australian resident as difficult as possible.

I then sought a ruling from the NSA's Office of General Counsel, the legal experts at the NSA. I cited the case that I wasn't seeking citizenship but they said that they couldn't give me a legal interpretation of this guideline in DCID 6/4, telling me 'it was not a legal question but rather a security matter'. Apparently the legal department was unable to rule on a legal question and lacked the capability to *interpret* the legal extent of agency directives. My lack of progress and feedback from Security convinced me that the breed chosen to work in that department had to be the most paranoid collection of employees the agency could find.

I eventually gave up on Security providing any assistance to me when my timeframe to resign had narrowed to a few months and my Department of Immigration contact assured me I would have no trouble obtaining my spousal visa immediately, given the amount of time I had already spent in Australia and the length of my relationship with Lou. He also told me that I would be eligible for permanent residency status immediately and that the citizenship timeframe would be approximately twelve months.

As I had come to love my new home, and I already identified

myself as an Australian in spirit, citizenship was what I now wanted. When I initially considered resignation over a year earlier, I only wanted Permanent Residency and to continue working with the NSA or within Australian Defence, in which case I needed a citizenship waiver to receive an Australian security clearance. But citizenship would also make it easier for me to receive an Australian Defence security clearance without the waiver and would allow me to make my twenty-three years of experience with the NSA available to the Australian Government, either as a contractor or as a government employee.

To cut any further red tape and make sure I obtained citizenship as quickly as possible, I requested help from my local MP, Maxine McKew, the Member for Bennelong. Her team was able to provide a letter from the Minister for Immigration and Citizenship, Senator the Hon. Chris Evans, that allowed me to take the oath only two weeks after I submitted my application for citizenship. Their help was invaluable in my efforts to become a citizen in the shortest possible time.

Unfortunately for me, as George W Bush prepared to leave office and my time at Pine Gap was coming to an end, the global financial crisis began to tighten its grip. I had chosen to resign at a time when the job market was progressively flooded with thousands who had held previously secure jobs but were now desperately seeking work. I believed I was in an advantageous situation as I had unique experience and skills that were quite rare in the Australian Defence industry. Experienced ELINT and intelligence analysts with a twenty-three-year history with the NSA were quite uncommon in both Australian government and contractor organisations. As early as 2008 I had verbal assurances from two very senior Australian government officials (former deputy chiefs on the SES level) that they would personally support my efforts to receive an Australian citizenship waiver to receive a security clearance as I was not eligible to receive a general Australian security clearance until I became a citizen. For these reasons I wasn't overly concerned about beginning a new career. I believed I would be out of work for only a few months after resigning before finding a suitable position working within the Australian Defence industry in some capacity.

So, on 5 October 2008, I left the NSA after almost twenty-three years of service. I would not receive retirement compensation from the United States Government for at least another seven years. This meant that I needed to start a new career—and soon—just to survive the very expensive living conditions in Sydney without relying on savings. Had I been employed by the CIA, I would have been eligible to retire early with full benefits at age fifty (in early 2009) as I would

have met their requirement of serving at least five years overseas. Unfortunately the NSA does not share this particular benefit with their employees.

When I left the agency I did so voluntarily, bearing no negative feelings towards my former employer—in fact, I felt only positive about my time with the NSA, how my career had realised my childhood ambitions, and how my time in Australia had introduced me to the love of my life. I had made the decision to resign consciously and willingly in order to join my family in Sydney. My time with the NSA provided me with a unique career, and until the day I left I was still excited and passionate about going to work. I had been given extraordinary opportunities and experiences in Maryland and Alice Springs. I had worked with many talented Australians and Americans and was honoured to have participated in many of the intelligence community's highest priority tasks and would recommend a career as a 'hi-tech spy' to any young person looking for an exciting opportunity to work for the government.

As I completed my employment with the NSA, I reflected on all I had accomplished. I never forgot that I was a civil servant, always doing the best job I could to ensure that I represented the United States effectively and with pride while serving in Australia. I was grateful to the NSA and the United States Government for working with me and allowing me to remain in Alice Springs for so long. With impending unemployment now a certainty, I completed the process of resigning from the United States Government.

On my final day at work, the deputy chief of Operations assembled the Operations team and said some very kind words about my contributions and longevity at Pine Gap. He and my supervisor then presented me with a plaque that contained a metal piece from one of the racks of equipment I had used for eighteen years. I also received a certificate of appreciation signed by the chief and deputy chief and was presented with a framed photograph of Pine Gap signed by many of my friends and colleagues.

As a long-time NSA employee, the agency also mailed me a sealed and folded flag that had once flown over the agency. I will always cherish these going-away gifts as mementoes of my experiences at such a unique place, as well as my time with the agency.

I took a final walk around Operations and said farewell to my friends and colleagues. As I turned the door handle to exit, I heard a good friend announce over the intercom system, 'David Rosenberg has left the Operations floor'.

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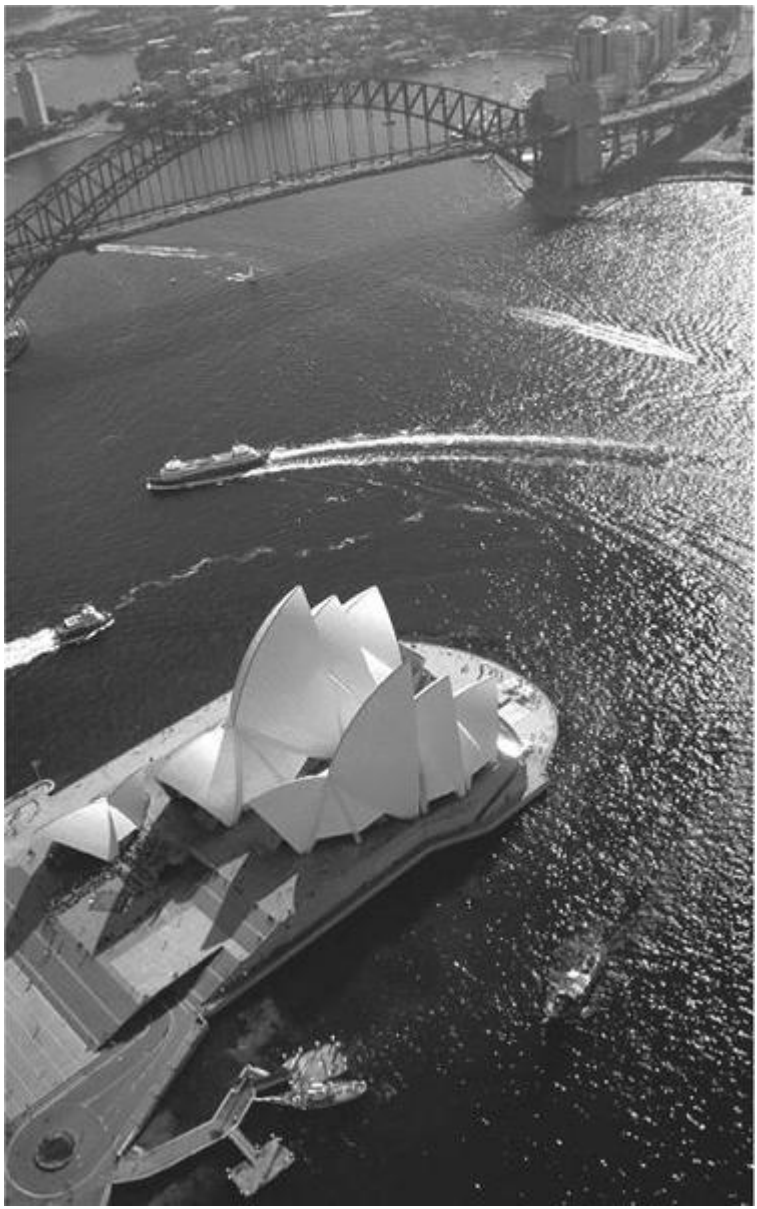
EPILOGUE:
BEYOND THE AGENCY



Sydney: my new home

Most career agency employees decide to wait until their

retirement years to write their stories. However, I had chosen to resign voluntarily from government service while still in my forties and forfeit a career that would very likely have taken me into the higher ranks of agency leadership had I elected to return to headquarters rather than remain in Australia. Resigning from the agency early, along with my inability to find full-time work, gave me the opportunity and time to write this book. I believe I never would have considered writing about my career had I secured a full-time position soon after moving to Sydney or if I had remained employed with the NSA until retirement.

When I left the agency, I was uneasy about looking for work since I'd spent almost a quarter of a century in steady, secure employment. Job hunting was new to me and it wasn't made any easier by the restrictions of having worked in a highly classified environment. I wasn't allowed to include any references to the NSA, Ft Meade, Pine Gap, Alice Springs or even Central Australia in my résumé. I was only allowed to say that I had worked in Australia, so unless a prospective Defence contractor knew about the inner workings of Pine Gap and could read between the lines to establish my technical credentials, I was unable to discuss the classified details of my work in any way or show work samples of what I had done.

Leonce Kealy's succinct summary of the precarious position of a highly trained but somewhat unemployable job seeker from Pine Gap puts into perspective the difficulty of finding post–Pine Gap employment opportunities:

> After all, when you leave Pine Gap, your employment opportunities are almost non existent. This is somewhat of a dichotomy in that you have learned skills that no-one else has been exposed to, but when going for an interview, you simply cannot say what you have been doing at Pine Gap. This far from impresses the interviewer.[1]

Kealy was referring to Australian citizens in Australia, but as I hadn't yet become one at the time and didn't hold an Australian security clearance, my opportunities in Defence were even more remote than these 'almost non existent' positions.

Résumés are subject to the same pre-publication review process required of manuscripts, and the PRB initially imposed an excessive amount of redaction from my résumé of information that was readily available in the public domain, such as the NSA's presence at Pine Gap. I believe my résumé suffered over-classification by the PRB and that it wasn't fully cognisant of the plethora of information about Pine Gap and NSA's presence that is readily available, both in books and via the internet. This apparent lack of awareness, coupled with the

somewhat paranoid concerns displayed by Security when I was seeking Australian residency, made my transition from an NSA employee to an eligible job seeker much more difficult than it should have been.

Former spies are at home in government, and it would have made sense to join one of Australia's intelligence agencies in Canberra. Defence Signals Directorate (DSD), ASIO or ASIS would have been a good fit. However, since my reason for moving to New South Wales was primarily to live in Sydney, I chose to start my search for a new job with a Defence contractor in the Sydney region. Within a short time of resigning, I signed a contract after being offered a position with a major international Defence consulting firm. They hired me to work on one of their government contracts in Canberra. The compromise meant spending four days in Canberra and three days in Sydney, but they offered to cover transportation and accommodation costs, so I signed the contract and looked forward to working with this global Defence organisation. My contact inside this company told me that the economic downturn in 2008 saw them forced to retrench at least ten employees, but I was told that my skills were so rare in Australia that they were able to hire me to assist the Australian Government in its efforts to improve Australia's signals analysis modernisation efforts, capability and associated training. As I still had seven months before I was eligible for citizenship, a citizenship waiver was required to obtain the security clearance. With assurances of support from two senior Australian government officials from Pine Gap, I believed I would receive the waiver quickly and would soon begin my new job.

I had discussed the issues involving security clearance waivers with many senior United States and Australian government colleagues, and all agreed that the cross-partnership (Australian, US, UK) security processes that are in place to transfer or grant a clearance to a non-citizen who already holds a clearance in one partner country were unnecessarily restrictive. 'The process is broken,' said a friend, a US citizen in the higher leadership levels of an intelligence agency, whose spouse was a US contractor but was unable to receive a waiver to work with a contractor in the UK where their partner was stationed, even though the spouse held a US security clearance. Another colleague on the executive level in the NRO believes the Director of National Intelligence (DNI) can facilitate a solution to the clearance issue, coordinating this on behalf of the intelligence community: 'My belief is that the DNI Security Policy people need to grip this from a Community level as the large majority of these projects are of mutual interest to both countries.'

There appears to be no clear, simple path to facilitate a security

clearance citizenship waiver (in lieu of receiving a full clearance) to those who could be working as a contractor within and across the partnership. It is easier to grant a waiver when moving from one country's government organisation to a partner country's government organisation and there are reciprocal agreements in place to do this. However, the process of receiving a waiver when going from being a foreign government employee to being a contractor in a partner country is virtually impossible.

After I resigned from the NSA, I received several enquiries from major Defense contractors within the United States about my availability to work with them there, and since I was an American citizen I could have started work immediately. But my home was now in Sydney, and as time went on, it became very frustrating that I wasn't putting my expertise to use helping the Australian Government on counterterrorism and counterintelligence cases, ELINT and SIGINT modernisation efforts, or improving training programs in various intelligence disciplines. Had there been an effective process in place to handle citizenship waivers, I believe my contributions would have been of immense value to Australia. Instead, I still haven't been able to obtain a security-cleared position that would allow me to return to work in the Defence industry.

I was hopeful for the citizenship waiver to be pursued and approved by the contractor, but was told by my Australian SES government contact that I, not the contractor's security office, needed to ask the current deputy chief at Pine Gap (another SES position) for this approval. I dutifully complied with this guidance, but the deputy chief refused to take my call. I was told that I needed to discuss this with Australia's security chief at Pine Gap. This person then told me that, as I would not be directly supporting Pine Gap, they were unable to help me. Both deputy chiefs knew in advance, however, that I would not be returning to Pine Gap.

In spite of personal assurances of support, the deputy chiefs apparently didn't know the process required to grant a waiver for a non-Australian citizen who isn't currently employed and has never held an Australian security clearance. If either of the deputy chiefs had followed through with their support and helped me to process the citizenship waiver, I would have secured full-time employment as a contractor that would have benefited their organisation directly. And yet working in that way meant that I would have been employed full-time and would not have had the idea, or the time, to write this book. In the end this will hopefully prove a greater worth to the Australian and American public—rather than, specifically, its government or intelligence community.

While I was seeking full-time work, a friend recommended me for

training as a youth justice conference convenor for the New South Wales Department of Juvenile Justice in Fairfield. I decided to do this as a way to broaden my experience and also because it gave me the opportunity to contribute to the community in a paid capacity by facilitating conferences between young offenders (aged eleven to seventeen) and their victims. This serves as an alternative to the young person appearing in court. The objective of conferencing is to develop an outcome plan that is agreeable to the young person and their victim(s) and repairs some of the harm to the victim caused by the young person. It is hoped that the conference will also help to prevent re-offending. This work was very rewarding as I was able to be part of the process that influences, and hopefully prevents, children from choosing a criminal path. This work allowed me to make a positive impact in my new community of Sydney, in a similar way to how I had worked as a volunteer on two charities in Alice Springs.

I also had a chance meeting with a former New South Wales police detective, Greg Locke, whose wife Deborah Locke is the author of *Watching the Detectives* and whose story was told in the television series *Underbelly III—The Golden Mile*. She is the police officer who exposed widespread corruption within New South Wales Police. While Greg and I were talking, he mentioned Deborah's book. I told Greg that I had worked for the United States Government at Pine Gap and had contemplated writing about my career now that I had time on my hands. Greg offered to put me in contact with Deborah's literary agent, Georg, who became intrigued with my (unclassified) history, and eventually became my literary agent.

At the time of writing, my efforts to find substantial Defence-related work in Sydney still haven't been successful. Some of my friends have asked me whether it was worth it to leave the world's most secure position and forfeit an excellent job, benefits and salary (equivalent to over $250,000 AUD/year in October 2008) at the time of the world's worst economic crisis in modern times. The answer has always been easy for me: I wouldn't do anything differently, even if I had known that I would not find full-time work for over two years. My family is the most important aspect of my life and I have experienced real joy over the last two years living with my wife and stepson. The relationship with Lou has deepened and neither of us can imagine being apart again. I feel blessed to be part of a true love story. Through these tough times, my wife has remained amazingly positive and has continued to support me in writing this book, despite being unable to read the text until completed and approved for publication by the PRB.

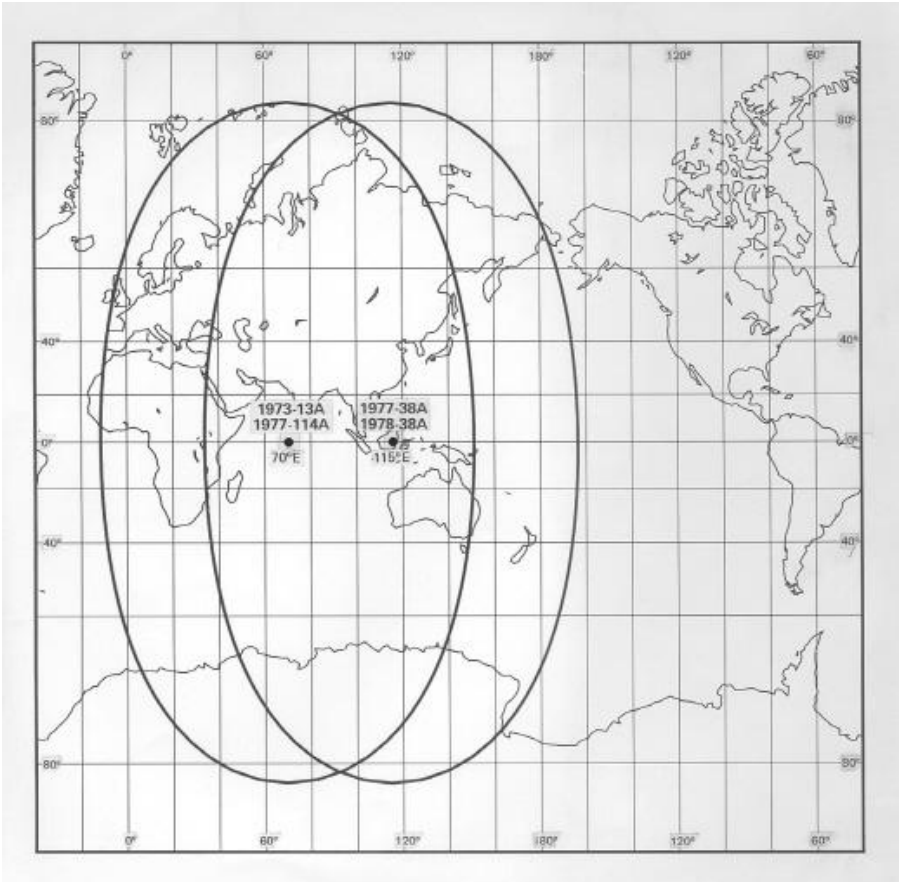
The controversial history of Pine Gap and the plethora of rumours

about what actually happens within the walls of Operations have fuelled the imaginations of many Australians for decades. If you were to ask a thousand Australians who remember the protests and reports of alien contact to tell what they believe actually happens at Pine Gap, you are likely to hear a thousand different stories. The presence of Pine Gap on Australian soil is an important part of Australian history, and by writing this book I hope to provide more understanding of what Pine Gap does and the necessity of maintaining ever-vigilant eyes and ears that protect the lives of everyday Australians and Americans, including the soldiers who protect us, wherever they may serve (as well as share my story—of living the life of a hi-tech spy on the other side of the world).

Pine Gap has become not only a recognisable but also a necessary part of the Australian landscape. As communications technology evolves and weapon systems become 'smarter' and more technologically advanced, Pine Gap analysts and the satellites that enable Pine Gap to perform many complex functions will need to remain at least one step ahead of the advancements. We need to know today what our future capabilities must be to counter the very real threats that exist now and those yet to come. The Pine Gap satellites are truly an engineering marvel and have succeeded in this respect for forty years.

As the commitment to mutual defence between Australia and the United States has strengthened and the partnership between the two countries has continued to grow, the Base has certainly played a part in helping to bridge the gap between our technical capabilities and cultural differences. I hope my account will increase the acceptance within Australia of the continuing presence of the facility. Much of what has happened at Pine Gap over the last forty years has now been revealed, from the inside, but what does the future hold for Pine Gap? Will Pine Gap still be relevant ten or twenty years from now? Will it still be there in thirty years' time? Only time will tell.

AFTERWORD



Satellite stations, May 1979 (Photos from Des Ball. Reprinted by permission from Pine Gap, 1988, Figure 11, Page 24)

It took me about six months to write most of this book, including time spent researching open-source information on Pine Gap available in published works and on the internet.[1] I included these references as supporting evidence of the mission at Pine Gap as I couldn't include classified material obtained from the facility. I wish to clarify that while writing this book, I did not use or request access to classified documents or information from Pine Gap or the NSA. Every story I relate is accurate and I have made every effort to provide a historically correct version of events as they happened. Any errors that may be present can be attributed to the potential fallibility of memory that can occur over several decades. The accountability to ensure that

I have related the facts correctly is my responsibility alone.

My personal experience at Pine Gap allowed me to identify and reference information about what happens in Operations from the plethora of sensationalistic information that is found in publications or is posted on the internet by conspiracy theorists and others who have never entered the Operations building.

Having spent the time writing this book, I was then captive to the process of working with the NSA's Pre-publication Review Board, which was often an exercise in futility. The legal ruling that allows the PRB a maximum of thirty working days to complete its review of my manuscript was never respected. It took over twelve months, with much frustration and negotiation, to finally get approval to publish.

To justify holding my manuscript longer than thirty working days, the NSA informed me that any works exceeding fifty pages are allowed to be held beyond this timeframe. I repeatedly asked it to show me evidence of this and to tell me what the legal timeframe was to complete the review of documents that exceed fifty pages. The PRB did not respond to these email requests. I then submitted a Freedom of Information request to the NSA asking it to cite its authority to hold for longer than thirty days any works that exceed fifty pages. I received a response in a reasonable amount of time, with the agency forwarding me a copy of NSA/CSS Policy 1-30, 'Review of NSA/CSS Information For Public Dissemination'. Under 'Responsibilities', Section 9, it states: 'The Office of Policy and Records shall: a. Conduct classification reviews of all information intended for public dissemination within twenty working days of receipt[1]' where the footnote (1) is referenced as: '[1] Except for information which must be referred outside of NSA for information exceeding 50 pages.'

The response did not state how agency policy can legally extend the federal court ruling in *US v. Marchetti* of thirty days, nor did it state exactly how many days the agency can hold an author's work beyond the thirty-day limit. This lack of a firm timeframe theoretically allows the agency to hold indefinitely any manuscripts that exceed fifty pages. I don't know whether the NSA itself has authority to supersede a federal court ruling, but it appears to have become a law unto itself in the case of pre-publication authority. The PRB at the NSA informed me that its team is relatively small and is often inundated with work from various authors requiring approval for publication. I was also told that my manuscript required the use of 'significant' resources across three US intelligence agencies.

I sent a disk containing my password-protected manuscript to the PRB on 7 December 2009, but it was not until 7 January 2010 that I received an email confirming receipt by the NSA. A subsequent phone call confirmed that the manuscript was actually received on Christmas

Eve. After many more phone calls, the PRB told me it had distributed my manuscript to the PRBs of two other agencies for independent review as my story contained ‘equities’ that required approval by these agencies as well. I often questioned the NSA as to how long it would take to finish its review. The PRB typically avoided answering this question by stating it had no control over how long the other agencies would take to complete their reviews. I believed a couple of phone calls to these agencies could have answered this question.

Almost four months after the PRB received my manuscript, I sent it an email informing it that the thirty-day limit had passed on 1 March and reiterated my desire to work with the PRB, understanding that my manuscript was longer than what it typically received. I also stated that it had held my manuscript for almost double the amount of time prescribed by the legal ruling and advised it that this delay had exceeded all reasonable expectations and resulted in a violation of my First Amendment right to freedom of speech. I gave the PRB a deadline to provide feedback, and if this deadline was not met, I would assume its concurrence for the manuscript to be forwarded to my agent and publisher, as is. Suddenly the wheels of government shifted gears and began to race forward. In less than twelve hours, I received a phone call from Security at Pine Gap requesting that I fly to Canberra for a secure video conference with the PRB to discuss its objections and suggestions.

Before the meeting, I had read that some authors had experienced ‘indefinite delay’ tactics on the part of the PRB,[2] and I was determined to compel it to make a decision about my manuscript. The meeting was held on 20 April at an Australian government building where the United States Government has a special office. On arrival, I signed a document authorising me to discuss top-secret SCI information. Two Australians were also in attendance, including the chief of security for an Australian intelligence agency. I had previously written to the PRB asking specifically whether any Australians would attend the video conference. I had been decisively told ‘No’ but was pleasantly surprised when I realised I would have the opportunity to tell the Australians personally that my main consideration was identical to theirs—to ensure that I would not reveal anything that would damage sources and methods of intelligence collection.

We entered a room protected by a cipher lock, then approached what looked like a large metal bank vault door, and it was in the ‘vault’ that the video conference was held. After two hours of discussions, approximately fifty pages were identified as containing classified information, much of which was referenced from open sources.

During the meeting I busily took notes and was promised that a

list of the written objections would be emailed to me. I made clear to those in attendance my sincere desire not to disclose classified information in my book. I also told them I would not publish some of the open-source information that they still deemed to be particularly sensitive, but I objected to some of their concerns about other open-source information that is well documented, easily found and should not be an actual security concern. They eventually agreed to most of my requests.

When I submitted my original manuscript, I had decided to provide the PRB with some information that I knew, or believed, to be classified, expecting that I would be asked to remove or change some of it. I decided to give the PRB 'everything' and have it edit the passages it objected to, rather than provide the PRB with a minimum amount of detail and be forced to guess what might be acceptable.

In addition to this, a Security representative requested that I relinquish my computer hard drive and any other storage media that may have contained classified information after I completed the final draft and deleted these classified documents from these media. I was told that my draft was classified 'Top Secret—SI/TK'[3] and that my hard drive might still contain remnants of these documents that could be accessed through the internet or if the hard drive was later sold as part of my computer. I agreed to this as a necessary part of the security process. When the meeting concluded, I signed another document that took away my temporary security clearance, and a few hours later I flew back to Sydney.

Four weeks after my meeting in the vault, I received a final spreadsheet with a list of 245 objections to material that the various PRBs considered classified. I have rephrased many portions of the book to make these passages unclassified, so if a story appears to be vague, this is due to the constraint of classification guidance. I have retained as much of the classified aspects of each story as possible, but where not possible, or to indicate that there was more to the story, I have blacked out these portions.

The Australian Government also requested the removal of certain passages, and although I am now an Australian citizen, I didn't work for the Australian Government while at Pine Gap, I was not an Australian citizen at that time, nor did I hold an Australian security clearance, so I was under no legal requirement to seek the Australian Government's approval to publish. However, I did in the end modify or remove passages that the Australian Government identified as sensitive. I believe it is not my place to discuss any Australian security-related subject that I was exposed to while employed at Pine Gap that the Australian Government identified as objectionable, even though some of this information is available in open-source

repositories.

The PRB required resubmission of my manuscript after I had edited it, although I cited some passages that I believed were unclassified and requested that they remain as written. Again, there were prolonged delays as I was informed via many emails that the NSA had no control over how long the other agencies would take to complete their review. After sixty-two days of silence, I informed the chief of the PRB that I had consulted with US attorney Mark Zaid about the excessive delays and the redaction of information that is available to the general public. To the PRB, I voiced my concerns that if I was not provided with suggested changes by 21 September I would interpret this as explicit concurrence from the PRB authorising me to submit the manuscript to my agent and publisher. One week later, I received a phone call from Security at Pine Gap informing me that all but one agency would have their feedback to me by the specified date, and this did happen.

Eventually, on 2 October, the PRB emailed me the final spreadsheet of its objections, which numbered about a hundred. I lightly rewrote much of this to remove the objectionable material, but decided to formally challenge the ruling of about fifty objections, including some direct quotes found in open sources. I did this through the NSA chief of staff, who replied to me on 25 November, almost one year since I had mailed my original manuscript to the PRB. I was pleased to discover that she concurred with most of my arguments, approving for publication almost 80 per cent of what the PRB had initially stated was classified. The end result is this book—an unclassified collection of stories that have exposed, examined and explained some of the classified missions performed at Pine Gap.

Despite my frustrations, I wish to express my appreciation to the individuals in the various PRBs who reviewed my manuscript and provided the feedback required to make this book unclassified and not damaging to US and Australian security concerns and intelligence collection capabilities. Those I spoke with in the PRB were always professional, apologising for the excessive delays and promising to have a result back to me as soon as possible. Finally, just over one year after mailing my original draft to the PRB, I was able to hand my manuscript over to my publisher.

Perhaps it is now time for a review of the current US federal court thirty-day ruling, which is in place regardless of the length of a manuscript, is apparently completely disregarded by the various PRBs and is not enforced by the justice system. The ruling applies equally to a one-page document and a 300-page work of non-fiction. This is not equitable. Rather, using word length as a basis for determining the number of working days to be allotted to the review process seems to

be a more appropriate way to guide, by legal mandate, the PRB to realistically fulfil its obligation in a reasonable amount of time. This change would maintain the balance between national security concerns and an author's right to freedom of speech, which would still be preserved, allowing the PRB to complete its review in a timeframe that is fair to both the PRB and prospective authors.

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APENDIX A—THE PRE-PUBLICATION REVIEW BOARD (PRB)

The high-level security clearance I held with the United States Government placed me under a lifetime obligation to submit anything that may contain classified information to the PRB at the NSA before general publication. The CIA's website contains a page discussing the pre-publication review process in great detail, providing potential authors with techniques and guidance to help them write an unclassified version of their story while preserving the main points of the classified information.[1] I found this website incredibly helpful in guiding me to tell 'top secret' true stories in an unclassified way without eliminating the classified focus. The NSA website does not currently provide similar guidance to former employees.

I was quite impressed that the CIA was not discouraging former officers within the intelligence community from relating their experiences to the general public. Times certainly have changed! For example, the website referenced a court decision involving the aforementioned Victor Marchetti. The decision stated 'that Marchetti [read any CIA author] "may not disclose classified information obtained by him during the course of his employment *which is not already in the public domain*" (Marchetti at 1317; emphasis added). The court also stated that, "Information, though classified, may have been publicly disclosed. If it has been, Marchetti [read any former CIA author] should have as much right as anyone else to republish it".'[2] 'An author may republish information if he or she can cite open sources for the same information.'[3] When this type of government intelligence information is published by a former CIA or NSA officer, it tends to confirm the open-source publication but does not constitute official acknowledgement. 'Allowing something to be published unofficially by a private citizen (even a recently resigned CIA officer) is not declassifying it.'[4] 'The courts have made clear that statements made by a former (government) employee, regardless of rank, does not constitute official release or acknowledgment.'[5] Hence I am allowed to discuss portions of the classified mission performed at Pine Gap, but the details I relate are not considered to have been officially confirmed as accurate by either the US or Australian governments.

Another limitation imposed on authors was the restriction of disclosing exactly where they had served. In 1997, Duane C 'Dewey' Clarridge published *A Spy for All Seasons*. On its website, the CIA stated: 'In reviewing the book, the Board relaxed a restriction previously applied during the Cold War in favour of allowing former

officers to say where they served, so long as that fact alone is not damaging to national security—as it could be in some locales—and to describe in general terms what they did, so long as they do not reveal sources, cover arrangements, sensitive liaison relationships, or covert facilities.'[6] Hence 'the Clarridge precedent', as it was dubbed, allows me to discuss my career at Pine Gap for the NSA since I neither reveal sources nor discuss cover arrangements. My presence in Alice Springs for eighteen years is also a matter of public record through phone bills, satellite television bills, affiliation with two local charities, appearing in the local newspaper on four occasions and acknowledgement by family and friends upon request. The liaison relationship that exists between the United States and Australia at Pine Gap was publicly acknowledged by both countries more than forty years ago when the treaty establishing Pine Gap was signed on 9 December 1966.[7] The association of certain government agencies with Pine Gap was discussed in detail more than twenty years ago in the book *Pine Gap*, published by Professor Desmond Ball.[8] Almost thirty years ago, an additional open-source reference by Professor Ball stated, 'NSA and DSD (Defence Signals Directorate) also have operations at North West Cape, Pine Gap and Nurrangar.'[9] It is also important to emphasise that Pine Gap is not a covert facility as its presence, personnel and function are well known to all of the major government security services around the world.

A second, more recent open-source publication by a US 'outside expert' on the NSA, James Bamford, also detailed the presence of NSA personnel at Pine Gap, a part of the liaison relationship between the United States Government (NSA) and Australia, as well as the satellite program.[10] Bamford also authored the first major revelatory publication of the NSA in 1983, *The Puzzle Palace: Inside America's Most Secret Intelligence Organisation*.[11]

The only truly classified aspects of Pine Gap are those sources and methods that have not yet appeared in the public domain, either through publication or other open-source information. Some of the actual results of the intelligence collection efforts at Pine Gap have not been previously revealed, either officially or unofficially, but are made available to the general public in this book.

APPENDIX B—THE INTELLIGENCE COMMUNITY

THE US INTELLIGENCE COMMUNITY: SIXTEEN ORGANISATIONS

INDEPENDENT AGENCY
Central Intelligence Agency (CIA)

UNITED STATES DEPARTMENT OF DEFENSE
Air Force Intelligence, Surveillance and Reconnaissance Agency (AFISRA)
Army Military Intelligence (MI)
Defense Intelligence Agency (DIA)
Marine Corps Intelligence Activity (MCIA)
National Geospatial-Intelligence Agency (NGA)
National Reconnaissance Office (NRO)
National Security Agency (NSA)
Office of Naval Intelligence (ONI)

UNITED STATES DEPARTMENT OF ENERGY
Office of Intelligence and Counterintelligence (OICI)

UNITED STATES DEPARTMENT OF HOMELAND SECURITY
Office of Intelligence and Analysis (I&A)
Coast Guard Intelligence (CGI)

UNITED STATES DEPARTMENT OF JUSTICE
Federal Bureau of Investigation (FBI)
Drug Enforcement Administration (DEA)

UNITED STATES DEPARTMENT OF STATE
Bureau of Intelligence and Research (INR)

UNITED STATES DEPARTMENT OF THE TREASURY
Office of Terrorism and Financial Intelligence (TFI)

THE AUSTRALIAN INTELLIGENCE COMMUNITY: SIX ORGANISATIONS

Australian Security Intelligence Organisation (ASIO)

Australian Secret Intelligence Service (ASIS)
Defence Intelligence Organisation (DIO)
Defence Imagery and Geospatial Organisation (DIGO)
Defence Signals Directorate (DSD)
Office of National Assessments (ONA)

APENDIX C—OFFER OF EMPLOYMENT FROM THE CIA

Staff Director
P.O. Box 12002
Arlington, Virginia 22209

21 November 1985

Mr. David G. Rosenberg
[redacted]

Dear Mr. Rosenberg:

We are pleased to inform you that, as a result of your interviews with officers of the Agency, we are hereby offering you employment at the grade and salary reflected below. This offer is contingent upon your satisfactory completion of our screening process which examines your professional competence, personal qualifications, physical-emotional health, and loyalty to the United States.

As explained in the material included in the original application documents we provided you, the screening process involves three elements: a background investigation and a medical and a polygraph examination. We will begin the background investigation at once, and we will notify you regarding the dates of your medical and polygraph appointments.

Please be advised that, as part of the background investigation, representatives of the Agency may contact your former and current employers. Our representatives will not identify the Agency by name, but they will inform the employers that you have applied for a position with the Federal Government.

Your employment application is being handled in a confidential manner. Consequently, we ask that you inform no one of your possible employment other than your immediate family. When corresponding with us we ask that you use the address listed above, and that you use only your street address, city, state, and ZIP code in your return address. (Do not put your name on the envelope.)

If you have served any length of time in the military, send us copies of all of your DD214's (Report of Transfer or Discharge from the Military) and any orders for the active reserve. We need these papers to determine your entitlements such as annual leave accrual rate and, if appropriate, retirement system.

Please advise your Processing Assistant if your plans change or problems arise. Thank you.

GRADE GS-07/4 PROCESSING ASSISTANT [redacted]

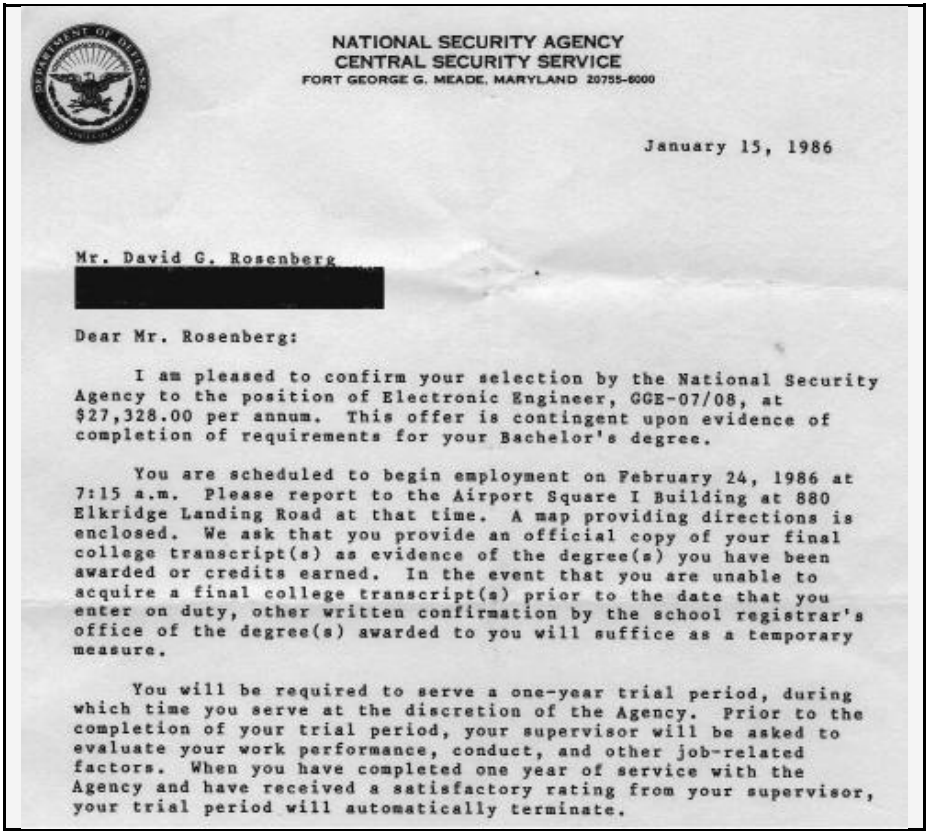
SALARY $26,627 (per annum) PHONE [redacted] (call collect between 10 a.m. and 3 p.m.)

Sincerely,

[redacted]

Staff Director

APPENDIX D—OFFER OF EMPLOYMENT FROM THE NSA



NATIONAL SECURITY AGENCY
CENTRAL SECURITY SERVICE
FORT GEORGE G. MEADE, MARYLAND 20755-6000

January 15, 1986

Mr. David G. Rosenberg
[redacted]

Dear Mr. Rosenberg:

I am pleased to confirm your selection by the National Security Agency to the position of Electronic Engineer, GGE-07/08, at $27,328.00 per annum. This offer is contingent upon evidence of completion of requirements for your Bachelor's degree.

You are scheduled to begin employment on February 24, 1986 at 7:15 a.m. Please report to the Airport Square I Building at 880 Elkridge Landing Road at that time. A map providing directions is enclosed. We ask that you provide an official copy of your final college transcript(s) as evidence of the degree(s) you have been awarded or credits earned. In the event that you are unable to acquire a final college transcript(s) prior to the date that you enter on duty, other written confirmation by the school registrar's office of the degree(s) awarded to you will suffice as a temporary measure.

You will be required to serve a one-year trial period, during which time you serve at the discretion of the Agency. Prior to the completion of your trial period, your supervisor will be asked to evaluate your work performance, conduct, and other job-related factors. When you have completed one year of service with the Agency and have received a satisfactory rating from your supervisor, your trial period will automatically terminate.

The normal workweek is forty hours, Monday through Friday. Under certain circumstances, however, it may be necessary for you to work overtime or irregular hours. Time worked beyond forty hours is compensated for in accordance with the Agency regulations concerning overtime pay. Since you will not receive a pay check immediately, I suggest that you have sufficient funds to meet living expenses for 2 to 4 weeks.

Appointment to this position requires a minimum commitment of two (2) years before you will be eligible to apply for any other positions at the Agency. Exceptions to this rule, however, will be made for applications to fill shortage skill vacancies.

Certain costs incidental to your relocation and movement of household goods are reimbursable by the Agency. The enclosed information sheet and transportation agreement provide instructions and guidance concerning these entitlements. To be eligible for reimbursement of travel and transportation expenses attendant to your employment with the Agency, you must complete DD Form 1615 (attached) and return it to us prior to the date you are scheduled to enter on duty. Failure to execute this document could affect your entitlements.

Information regarding car pooling, employee benefits, and other matters will be provided to you during our employee orientation.

I congratulate you for having met the high standards maintained by the National Security Agency in selecting people for employment, and I believe that your services will contribute significantly to the accomplishment of our mission.

Please complete the enclosed reply to Offer of Employment and return it to us at your earliest convenience.

Sincerely,

[redacted]

Chief, Selection and Placement
Office of Employment

Enclosure(s)
a/s

APENDIX E—SOME UNITED STATES GOVERNMENT EMPLOYEE OVERSEAS BENEFITS AT PINE GAP (1990–2008)

BENEFITS IN PLACE IN OCTOBER 1990 AND AFTERWARDS	BENEFITS REDUCED OR DISCONTINUED (APPROXIMATE DATE)
1990—10% pay increase for hardship tour	-
1990—15 days of Home Leave per year	
1990—Free housing, including furniture and utilities	
1990—Paid American holidays (even when not working on the holiday)	
1990—Option to bring car to Australia (no cost)	
1990—American Post Office (APO) privileges	
1990—Basic medical services	
1990—Some medical treatment in Adelaide, sometimes including the cost of flights	
1990—Education subsidy for dependent children	1999—Subsidy reduced by about 20%
1990—Free prescriptions, sunscreen, soap, shampoo	1992—Discontinued
1990—Free blood/cholesterol tests	1994—Discontinued
1990—Bus service to/from work and R&R bus runs	2000—About half of all R&R runs eliminated
	2001—Some, not all, R&R runs reinstated
1990—Free business class flights (within cost limits)	1997—Reduced money for R&R by about half to/from the USA for employee and family
2006—Eliminated funds (~ $1000) to cover incidental costs during Turnaround	
1990—Gym facilities (time spent at gym based on mission director's	2008—Gym time limit changed at discretion of mission director to 30

approval)	minutes
1990—Adelaide flats daily rent subsidised at $30/day	1995—Daily rent raised to $65/day
2000—Adelaide flats/medical aid discontinued	
1990—No upper limit on time away from Base for R&R and Turnaround	1995—Time away on R&R and Turnaround limited to 30 days
1990—Free use of fully stocked lapidary shop	1996—Lapidary shop closed
1990—Base 4WD rental available for $0.25/km	1996—Discontinued
1990—Loan shed for employees (lawn mowers, tools, etc)	1997—Reduced items available at the loan shed
2002—Loan shed closed permanently	
1990—Free Do-It-Yourself (DIY) program for employees (pergolas, garden material, etc)	1999—Discontinued
1990—Could upgrade to a larger house after three years when approved for a new two- or three-year tour	2000—Eliminated tenure-based housing moves
1990—Laura Creek tax-free alcohol, soft drinks, and tobacco ordering privilege through US Embassy	2000—Discontinued
1990—Free US cheque cashing through Finance	2001—Discontinued
2002—Motorpass fuel discount (tax-free fuel)	-
2002—DEFCOM discount purchasing program	

GLOSSARY

Airborne Warning and Control System (AWACS)

An aircraft fitted with a radar that is designed to detect other aircraft. The AWACS operators can distinguish hostile aircraft from friendly and can direct bombers and fighters to their targets.

Air-to-Air Missile (AAM)

A guided missile fired from one aircraft at another aircraft with the aim of destroying it.

Al-Qaeda

(Literally 'The Base') A radical Islamist organisation founded in approximately 1989 by Osama bin Laden with the purpose of uniting Muslims to fight Western countries and expel Western influences from Muslim countries. Responsible for the September 11 terrorist attacks in the United States in 2001 and other terrorist attacks around the world since the early 1990s.

Australia Day Council (ADC)

An organisation whose mission is to inspire national pride in being Australian. The Alice Springs council holds fundraising events to help purchase books for schools.

Australian Secret Intelligence Service (ASIS)

The agency responsible for operations involving foreign intelligence, counterintelligence and liaising with intelligence agencies overseas. The Australian equivalent of the US CIA.

ballistic missile

A rocket that, when launched, follows a sub-orbital ballistic flight path in three phases: powered flight, free flight (comprising the majority of the flight time) and re-entry into the Earth's atmosphere. The missile can carry one or more warheads (possibly nuclear) to a predetermined target.

Central Intelligence Agency (CIA)

A United States Government civilian intelligence agency whose primary function is to collect intelligence about foreign governments, individuals and corporations in response to security concerns.

COMINT (communications intelligence)

A category of signals intelligence that involves information derived from the interception of foreign communications by other than the intended recipients.

counterintelligence

Information gathered and activities conducted to protect against espionage, other intelligence activities, sabotage or assassinations conducted for or on behalf of foreign powers, organisations, persons or terrorist activities, but not including personnel, physical, document

or communications security programs.

cruise missile

A guided missile launched from a land-based, ship-borne or airborne platform at a specified target and that carries an explosive payload. Flight time can vary from several seconds to more than two hours.

cryptanalysis

The steps or processes involved in converting encrypted messages into plain text without the initial knowledge of the algorithm or encryption.

cryptography

The enciphering of plain text so that it will be unintelligible to an unauthorised recipient.

Defence Signals Directorate (DSD)

The Australian government's intelligence agency responsible for signals intelligence and information security. Equivalent in function to the US NSA.

Director of National Intelligence (DNI)

A United States Government official responsible for serving as the principal advisor to the President of the United States, the National Security Council and the Homeland Security Council for intelligence matters related to national security. This person also serves as the head of the sixteen-member US intelligence community, overseeing and directing the National Intelligence Program.

electronic attack

A subgroup of electronic warfare that includes any electrical or electronic device or technique designed to trick or deceive radar, sonar or other detection systems with the purpose of denying targeting information to an enemy. Formerly known as electronic countermeasures (ECM).

ELINT (electronic intelligence)

Technical and intelligence information derived from foreign electromagnetic non-communications transmissions by other than the intended recipients.

jamming

An offensive form of electronic warfare that involves radiating concentrated electromagnetic energy signals designed to defeat the function of a radar, communications signal or data transmission.

JDSRF (Joint Defence Space Research Facility)

The original name of the facility located near Alice Springs, Australia, jointly run by the United States and Australia. In the late 1980s the name was changed to the Joint Defence Facility Pine Gap.

NRO (National Reconnaissance Office)

A Department of Defense agency tasked to ensure that the United

States has the technology and space-borne and airborne assets needed to acquire intelligence worldwide, including support to such functions as monitoring of arms control agreements, indications and warning, and the planning and conducting of military operations.

professionalisation

The process an NSA employee was required to undergo in order to be eligible for promotion to Grade 13. The process usually included writing a thesis paper on a subject in the aspirant's career field to demonstrate mastery of a particular concept, and successfully answering questions related to their area of expertise. The program was terminated by the NSA around 2001.

SAM (surface-to-air missile)

A guided missile launched from the ground that is designed to destroy aircraft or incoming missiles.

SIGINT (signals intelligence)

The process of gathering and reporting intelligence through the interception and subsequent analysis of signals. ELINT, COMINT and FISINT are all subsets of SIGINT.

Stealth

A technology applied to aircraft, ships, submarines and missiles to make them appear less visible to radar, sonar and other detection methods. Stealth techniques include using radar-absorbent material which includes special paint and foam, and designing the shape of metal surfaces in such a way as to minimise the electromagnetic reflection of a signal back to its origin.

UAV (Unmanned Aerodynamic Vehicle)

An aircraft that flies without a human crew onboard. The UAV can fly either by remote control or autonomously based on a pre-programmed flight plan. Some UAVs are capable of carrying and firing missiles and almost all military UAVs are capable of relaying video images back to the ground control site. UAVs are distinguishable from missiles in that UAVs are designed to be reusable.

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PICTURE CREDITS

Many of the photos used in this book are from my personal collection. Many thanks to Professor Desmond Ball for providing some rare images of Pine Gap that have not appeared in print before (♣, ♦ and ♥–♠ image section). I wish to acknowledge Tektronix, Inc for granting permission to reproduce the images found at the start of Parts I, II, III and IV. These are representative examples of signals and signal environments sometimes observed in the electromagnetic spectrum, which have been modified from their original appearance. My thanks also to St Philips College in Alice Springs for granting permission to reprint the image with Headmaster Chris Tudor. The images which appear on †, ‡, Δ, $, O and ◊ are from Getty Images, and the one on Θ from Newspix.

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Firstly, I wish to thank my literary agent, Georg Karlov, for his faith in my ability to complete this project, for his patience in waiting for the approved manuscript and his belief in the unique story I had to tell. Thank you for taking a chance on me and for your ongoing encouragement.

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Special thanks to my colleagues at Pine Gap. Sincere and heartfelt thanks to Kevin for training me as a novice on such sophisticated equipment; to Darren for your ability to find and interpret the subtle and important modifications to several threat systems that might have escaped the eyes of other analysts; and to Bryan for setting a high standard of excellence on our work position while providing effective leadership within Operations—you are truly a future leader at the agency. I also acknowledge the many other military and civilian colleagues at Pine Gap who possess unsurpassed specialised knowledge. I was constantly amazed by your ability to ‘dig deep’ and extract unique intelligence that may have been missed without your persistence and ability to follow your instincts until you found the nugget of gold.

To my friends in Alice Springs who made my time so rewarding and helped me adjust to life in a very small town: Anna Costello—the social director of Alice Springs and my closest friend when my time in Alice was coming to an end. As my flatmate for one year, you ensured my house was never quiet at a time when I needed a bit of noise—

thank you! To Scotty and Shona Harris, Marge Harris and the memory of Reg Harris. As four of my favourite Australians, you will always be close to my heart. My thanks to Terry and Alison Lillis, two of Alice Springs' leading citizens, who selflessly crusaded for drug rehabilitation in our small town. Your friendship during my last six years in Alice Springs will be fondly remembered, and I thank Terry for taking the time to meet with me in Sydney to provide his account of the early years when the Joint Defence Facility Pine Gap was truly just a vacant lot. To my many friends in the local charities who selflessly devoted their time to supporting the Alice Springs community in myriad ways—you are truly special and I am blessed to share your friendship. To the memory of my good friend Mark Bunting, a gifted musician and gentle man who entertained us on many occasions, provided love and friendship to his mates and endeared himself to everyone. And to Joe and Pat, my Alice Springs family who fed me almost every night when I first arrived in Australia, providing me with a warm and loving home away from home.

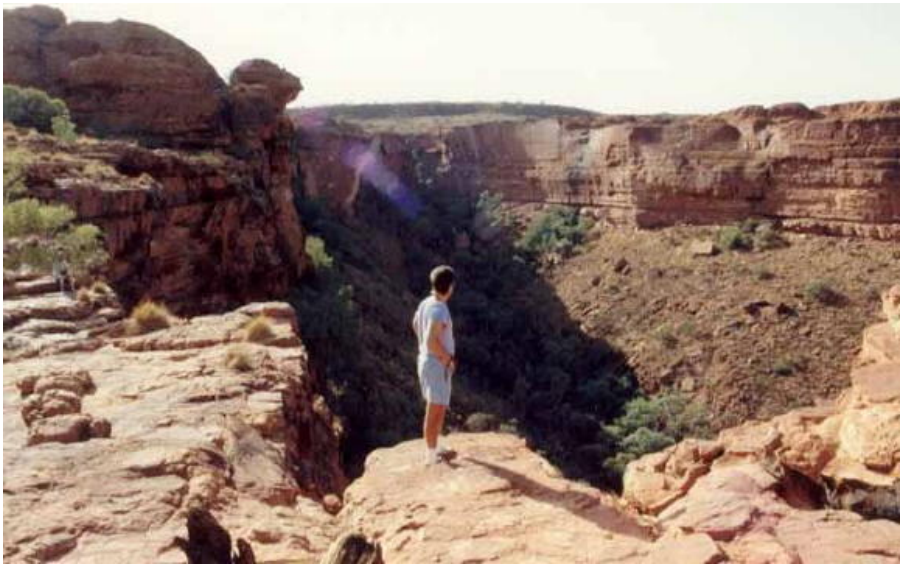
My thanks also to Professor Des Ball of the Australian National University (ANU) for spending valuable time writing the Foreword—your input is much appreciated. To my good friend and talented writer, David Carroll, many thanks for assisting me with the final edited and PRB-approved manuscript. Thank you for sharing your expertise and providing a wonderful learning experience for me.

I also wish to acknowledge the efforts of my Member of Parliament, the Hon. Maxine McKew, and her team, particularly Elizabeth Wulff, in helping to facilitate my Australian citizenship in the shortest possible time by enlisting influential support from the Minister for Immigration and Citizenship, Senator the Hon. Chris Evans.

Finally, I would like to thank my family. To my mother Lisa, who did an extraordinary job raising two young boys alone while instilling values that would serve us well throughout our lives. To the memory of my father Harold—you came to the aid of your country when you were needed, enlisting as a private in the United States Army in the early days of World War II. Your patriotism was an inspiration to me when I too was able to serve my country with the NSA. To my stepson Liam for giving up some of his computer time whenever I was inspired to write, and for respecting the privacy I required to write this book—thank you for your support. I also wish to thank Bernice, more a close, wonderful friend to me than just my mother-in-law; your heart knows no boundaries and I am grateful to you for making me feel welcome and a part of your family from the beginning. To the memory of my father-in-law Brian, an extraordinarily kind man, the life of the party and a role model for all.

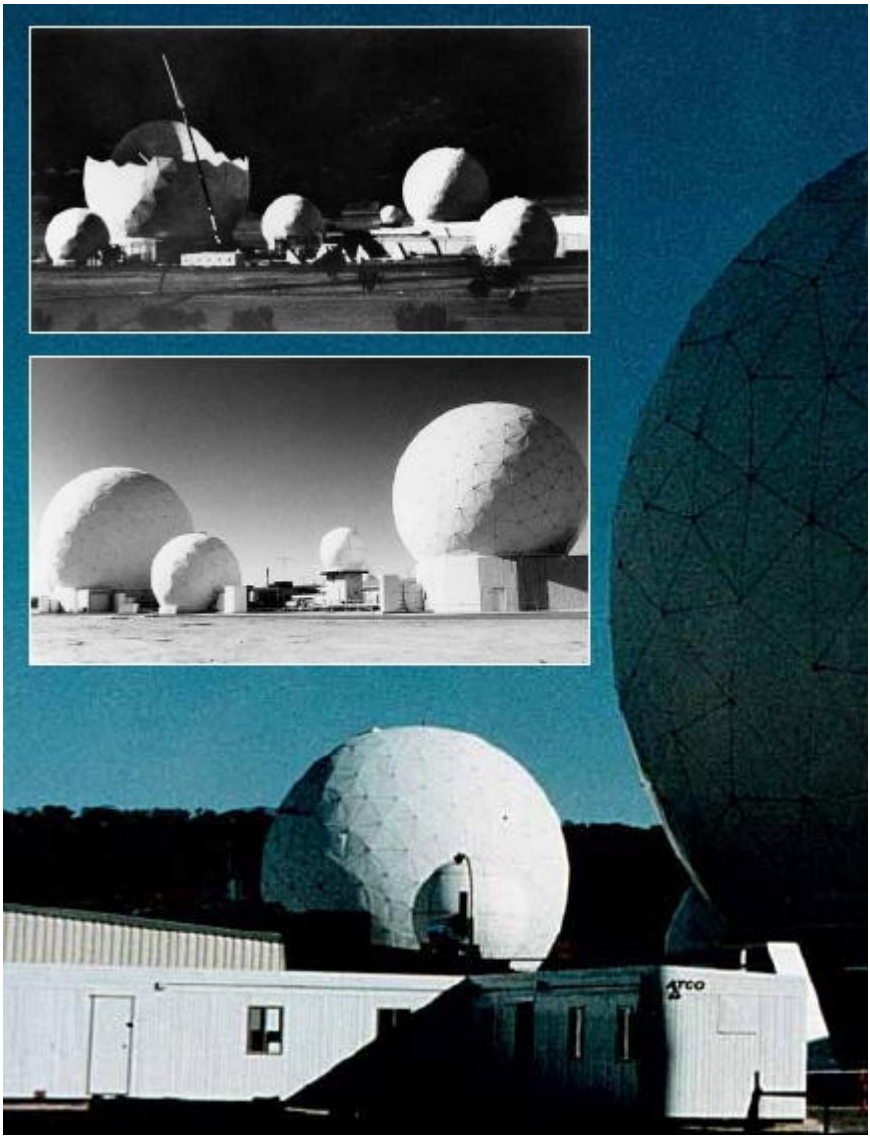
I especially wish to thank my wife Louise for her support and encouragement. You are my inspiration and the most compassionate, loving, patient and truly caring person I have ever met. Your faith in me, that I would eventually be able to write my story, helped me through some very depressing times of unemployment and delays with the PRB. I am truly blessed to have you as my wife and I wouldn't have been able to complete such a comprehensive project without your love. Writing this book is a journey we have shared. We never knew what our final destination would be, but we made it the only way we knew how—together.

PHOTOGRAPHS



The view at Kings Canyon (1992)

My friend Gerald at a No Speed Limit sign just outside Alice Springs (2001)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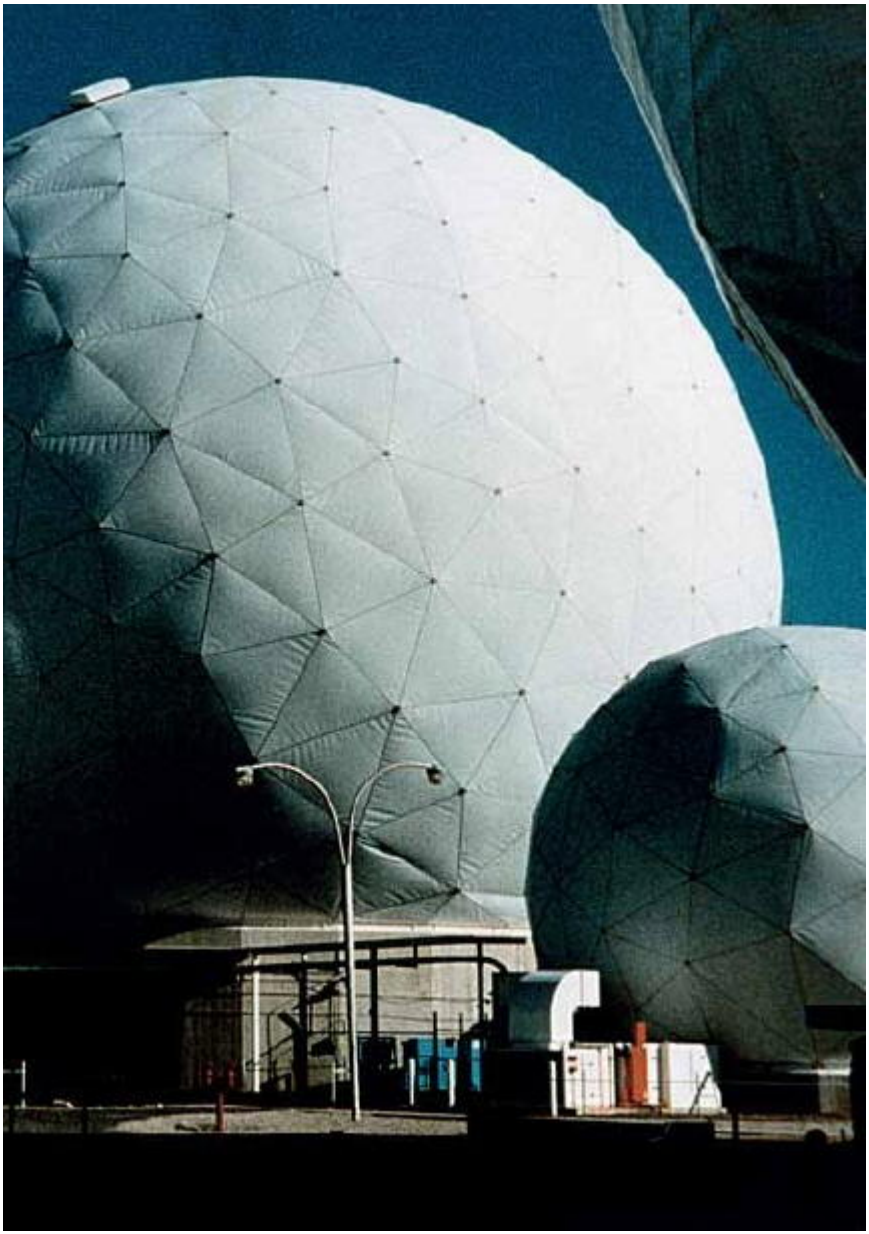
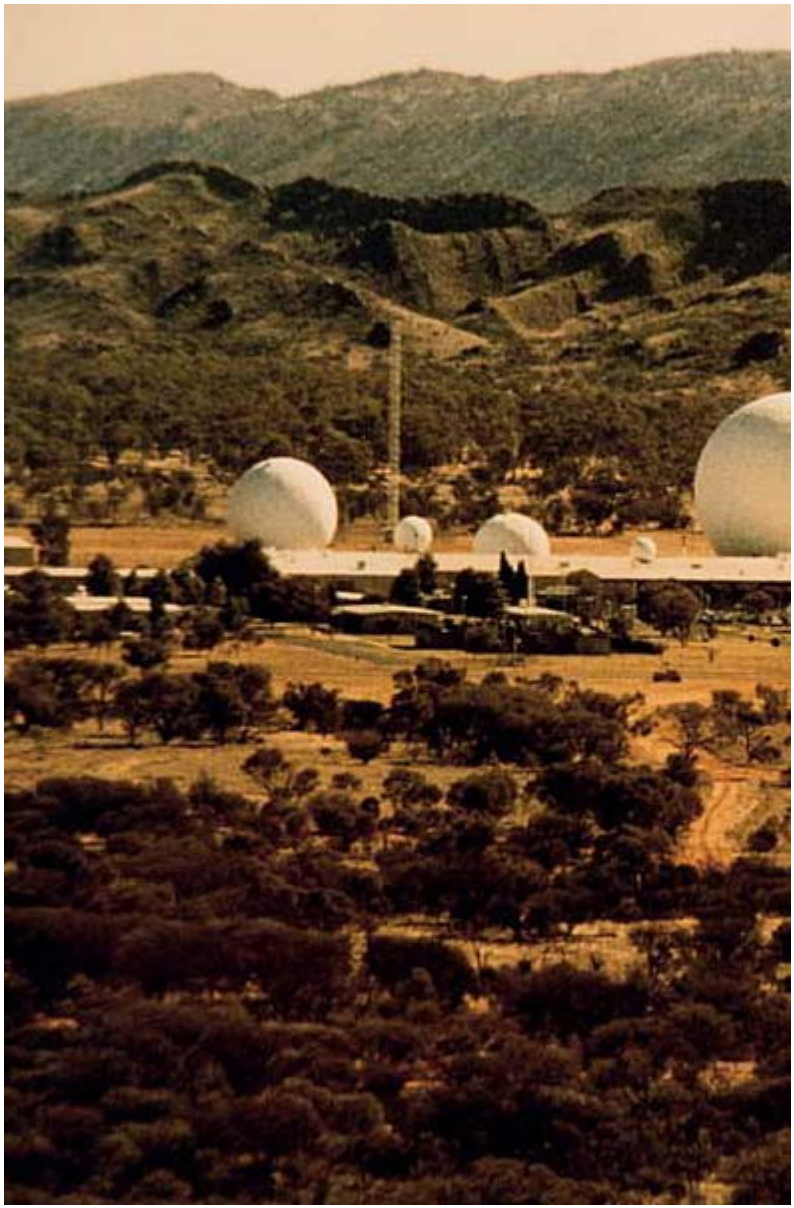
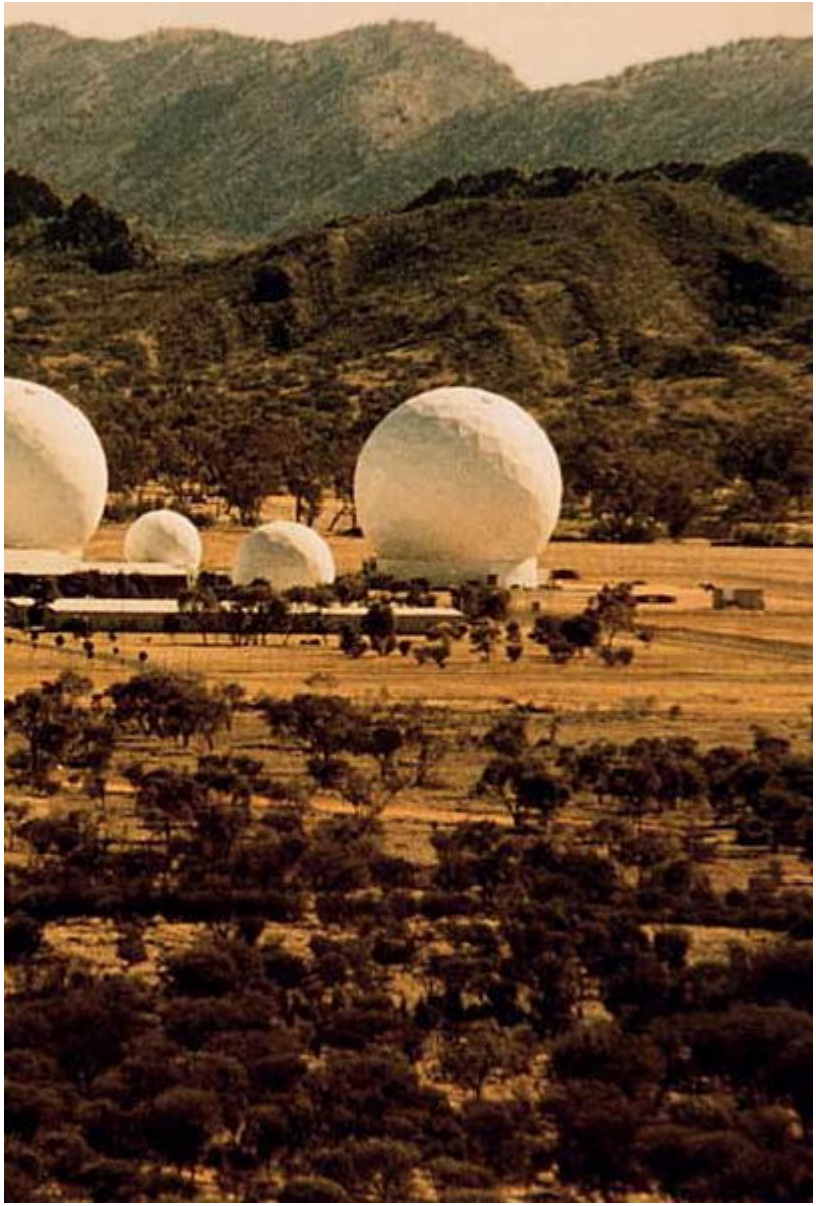
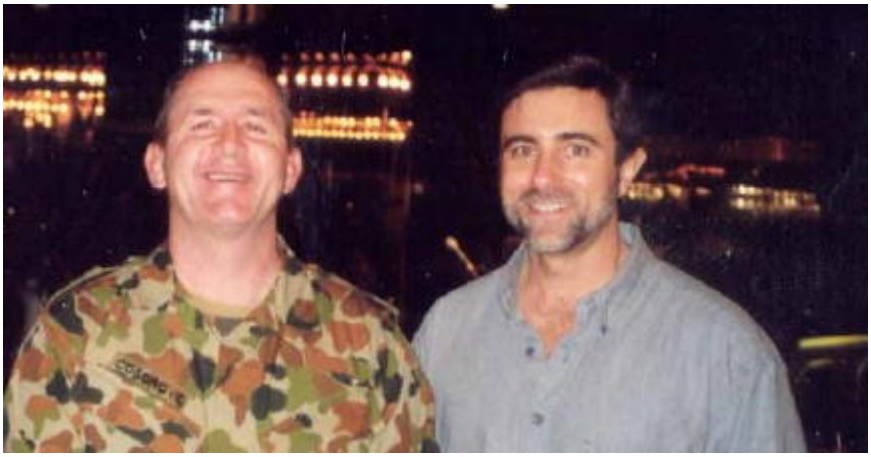


The Joint Defence Facility Pine Gap in the 80s (this page, and next)







Meeting Lt. Gen. Peter Cosgrove, Australian of the Year, at the ADC's luncheon (2001)

Lt. Gen. Michael Hayden presenting my promotion certificate to Grade 14 (2004)

Presenting a $1000 schoolbook voucher from the ADC to Chris Tudor (left), St Philips College Headmaster (2001)

Meeting philanthropist Tony Milhinhos, Senior Australian of the Year, 2005

The JDSRF cufflinks that were given to Reg Harris

In Recognition
of Your Dedicated Service
to the Joint Defence Programs
of the
Commonwealth of Australia
and the United States of America,
This Certificate is Presented to

David G. Rosenberg

With Appreciation of the
Joint Defence Facility Pine Gap
Alice Springs, Australia

October 1990- October 2008

[redacted] [redacted]

Leaving gifts: a flag from the NSA; the going-away plaque; Certificate of Appreciation

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notes

NOTES

1

http://en.wikipedia.org/wiki/Rhyolite/Aquacade

2

See Appendix A.

3

See Appendix B.

Kealy, *The Pine Gap Saga.*

Ball, *Pine Gap*, pp. 33–54.

ibid.

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8

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